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TO IMPROVE THE SOIL AND THE MIND.

[SERIES.

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mand. We must, therefore, seek to supply from the soil the wants of the many other classes of people, who necessarily depend upon agriculturists for their subsistence. This system of supplying demand saves us from speculative acts, hopes and fears, restraining us within the legitimate scope of our vocation."

The address then goes on to show by statistics that the demand for beef, pork and mutton, in New-York city, is far beyond the power of our State to supply—that this demand is ever increasing there, and in all cities and towns—making stock a profitable product to the farmer. Butter and cheese are also largely consumed. From these facts he argues as a substitute for wheat raising, that we "breed, feed and fatten more animals than has been our custom." It is not likely that he anticipated—indeed, no man did—the great agricultural resources of the West, which were to be so rapidly and astonishingly developed, or the immensely increased foreign demand for all our products, which has arisen so recently—a demand which all our enterprise and labor will not soon supply, as the one will long keep pace with the other.

Other public spirited and far-seeing men sought to direct the attention of farmers to the certain and ever-increasing demand for wool and fine fruit, and to the importance of improving the character of these and of our dairy products. The improvement of meadows and pastures was ably urged by Mr. Delafield; he declared that a "reform in their treatment must take place before we could breed or fatten cattle to the greatest advantage." And a reform has taken place, or rather has been commenced, and just so far as it has gone, just so far our stock rearing and feeding proves profitable. It would have been impossible ten, or even five years ago, to have done such a business as we are now doing in cattle, sheep and swine. And our dairy products have been largely improved, both in amount and character, until there are ten first-class dairy farms where there was but one a decade of years gone by. The number of pounds of wool now marketed is far beyond the most enthusiastic hopes of those who have urged this interest upon us, and the fruit crop of more than one county of the "Genesee country," is frequently as valuable as was its wheat crop when that grain was its chief reliance for export.

In one of the agricultural addresses of the late JOHN DELAFIELD, Esq., he gave this subject his careful consideration, and his remarks fore-shadowed in some respects, the changes which have taken place. The question, he remarked, "does not admit of a specific reply, and can only be met by suggestions applicable to our farms in proportion to the capital employed, and to their conditions of fertility. Many have substituted barley; if all farmers do so, we may not find a compensating market value, for a supply suddenly increased." This remark was indeed prophetic. The supply was so increased that prices went down from one hundred to one-hundred and twenty-five per-cent within a few years, and barley growing ceased to be remunerative, both from this cause, and the injuries of various insects to which it was newly subject. Mr. D. lays down these sound principles: "An established rule of economy is, that *supply will follow and be created by demand*,"

The changes in our farming may be briefly stated as the substitution of many products for a single one, marked largely by the increased attention given to the improvement of the grass and forage crops, and their manufacture into animal products; wool, pork, beef, mutton, butter, and cheese.

Wheat farming, pursued alone, was an exhausting system, while stock growing and feeding is an improving

system of agriculture. It is so because it insures manure and its application, and it will ever be found, on our arable soils, that good grass crops show that we are prepared for growing good crops of all kinds. The wheat crop is again quite an item in our exports, and it is grown with quite different culture and preparation from that formerly given.

Clover enters largely into our rotations—so much so that we begin to export instead of importing clover seed, as we did less than twenty years ago. Indian corn has a greater share than ever in our agriculture—as it is found that more cattle-food can be grown of this crop on an acre than as cheaply of anything else, and that pork-feeding in connection with dairying is a source of profit. Spring wheat has been largely produced, but is fast giving way to the winter variety—though in many instances it has proved quite remunerative. The oat crop is of considerably increased value. Peas are also considerably grown for feeding sheep and swine, while a new product—white beans—proves one largely profitable to the producer, and is receiving considerable attention. The wool clip is constantly increasing in amount, and sheep receive far better care than formerly, as a general rule. Root crops are more extensively grown, and their value more widely appreciated. And the great crop of all, the one lying at the foundation of all good husbandry—the manure crop—is gaining an acknowledgment of its claims from the farmer.

From these facts it will be seen that quite a change has taken place in the products and resources of our agricultural population—though our remarks apply more particularly to Western New-York, still they are more or less true of our general condition. Greater enterprise and foresight are given to the business—if a demand arises, the supply is quick to follow it—and far more capital is now invested in farming than ever before. It only requires thoughtful and judicious management to secure as fair returns from this pursuit as from any in which we can as safely and honorably engage.

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Sundry Wants of Domestic Animals.

SALT in regular or frequent supply is a necessity in the animal economy, in order to healthy growth and development. The blood contains a considerable per centage of this ingredient, hence to some extent the desire manifested for it by all grazing animals, as their food contains it in almost inappreciable amount. Dairy stock need it in addition, to supply the salt contained in the milk of which they are daily drained. Horses and sheep should frequently be supplied with salt in summer, and the wants of swine should also receive attention. In winter, the first named animals, if not fed with hay which was salted in the mow, should have an occasional feed brined especially for them, in the warm days of winter. Calves should receive the same attention. Swine require salt when penned in order to health, and when fattening, the proper digestion and assimilation of their food cannot go on perfectly and economically without it. In other words, they will fatten faster on the same food salted, than if fed to them fresh, and will eat more and grow more rapidly because of the better health and appetite.

WATER—pure water—of convenient access at all times when desired, is another requisite for farm stock. They are good judges of their wants in this respect, and generally can safely be trusted. Cattle and horses are usual-

ly allowed water once or twice a day, both summer and winter, and under necessity will soon acquire the habit of drinking at one time all they require for twenty-four hours. It is much better to water twice a day, as they then need not fill themselves with so large an amount of cold fluid which must be far from comfortable in severe weather. Sheep, hogs, and poultry, also need water at all seasons, and will drink frequently when they can do so conveniently. Pigs and poultry will drink from impure puddles rather than go thirsty, but it is miserable economy which compels them to do it.

REST—comfortable repose—is another requisite to the thrift of domestic animals. When at pasture they eat and rest, spending at least one-half the twenty-four hours in a recumbent posture. The horse eats his meal of grass, or oats and hay, and then stands at ease, or lies down if it be night, to digest it. If he labors, he certainly needs to lie down after taking his evening meal. It is the plea of laziness rather than of a proper regard for the comfort of this faithful servant of man, which claims that the horse can be taught always to stand in his stall. It is true he will stand all night, rather than lie in a filthy and uncomfortable bed; but how much more to his liking a well-littered stall, where he can lie at ease when he wishes repose. Cattle will stand in dirty sheds and stables until *wearied down*, but when these are dry and clean, they spend a good share of their time in recumbent position, requiring less food, and thriving better than when deprived of opportunity for resting quietly at pleasure. Sheep-sheds and yards should be dry, and kept clean by frequent littering. We need not argue the liking of sheep for quiet comfort at all seasons. But if any animal enjoys a warm, dry bed, and uninterrupted sleep, it is the hog. If any complain of the neglect of their wants in this respect, it is this animal, and we cannot blame them for the clamor, when treated as swine sometimes are, crowded into small pens, and forced to eat and lie in their own offal. Give the pigs a sleeping room and straw, and allow them a chance to practice cleanly habits, and no animal is more nice in regard to their beds than they.

FOOD, the chief want of every living being, cannot be forgotten by those who have care of domestic animals. But their liking for *variety*—for a change of nutriment and condiment—is a matter of some importance. It is worth our while, then, to provide a variety of kind—of hay, with cornstalks, bean and pea straw, and of wheat, oats, &c., and give our stock a feeding of each, as judgment dictates. The different roots and grains are also requisite, and their use is ever rewarded by the better thrift of the farm stock. Every year sees a greater attention given to these points, and a greater improvement and profit from the various domestic animals, and always the most from the greatest thought and labor bestowed upon supplying every real want and instinct of their natures.

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[For the Country Gentleman and Cultivator.]
MY THREE-COW DAIRY.

At the beginning of 1862, I made up my mind I would know just what three cows would do in 365 days. Here is the result—695 pounds of butter, besides selling 200 quarts of milk and 11 quarts of cream, and using all the milk and cream we wanted in a family of three persons, and raising two calves. I have done it all myself—no *Bridgets* or *Susans* to help in the least. Been very regular in milking, and kept my cows in the stable every night the year round. B. J. CAMPBELL. *Glen Haven, N. Y.*

FEEDING FATTENING ANIMALS.

In a recent article on this subject, (Co. GENT., Dec. 4, 1862,) we offered various considerations in regard to the early care and treatment of animals intended for fattening, and promised again to recur to it. We would now, as proposed, offer a few thoughts on the most economical feeding, time and manner considered, for market.

Swine are readily kept growing, but as a general rule cannot be made very fat in hot weather. They will not consume sufficient food for the laying on of a very heavy burden of fat. This points to summer feeding to increase their size, and the keeping until cool weather for the finishing-off process. We believe it a good plan to have a stock of old corn to furnish meal for the first six or eight weeks feeding, and then to finish up with new as it ripens, if the old stock fails us. Many farmers think, and experiments have been made to show, that old corn is more perfectly digested and assimilated than new, and hence is of greater nutritive value. It is certainly a fact that it goes farther toward making pork when fed in autumn, than a considerably larger amount of new corn fed in cold weather. The pea crop has been considerably employed in the early feeding of swine, ripening in good season for that purpose, and also proving an excellent preparatory crop for wheat, so that it can be grown very economically, considering its slight additional demand for labor and upon the soil, over the bare fallow.

Beef cattle fatten most rapidly in summer at pasture, and if kept well through the winter, and given some meal daily toward spring, can soon be brought into fine order for market by grazing alone. But for stock in low condition which it is desired to fatten, good summer pasture during the day, and from four to six quarts of meal at night should be provided. "This treatment," "Large Feeder" is quoted by the *Homestead* as saying, "will get cattle into just as good condition as our market calls for, but if the feed of meal is increased when cool weather comes on, they will lay on the fat in a way that will make you laugh along about the time we are having the first smart frosty weather."

The further suggestions about beef of the journal above quoted, are so pertinent to the train of thought we were pursuing, that in substance, at least, we shall nearly coincide.

In early winter beef is about the lowest in price that it is during the year, but if you have hay and grain to feed, you can keep the cattle up, and the price will increase toward spring, so that you will get pay for your corn or other grain, and a large profit in the manure, which will—with good judgment in buying, feeding, and marketing—pay you for your trouble. "The profits of fattening any kind of stock depend not so much on the price it sells for, because the price of corn, etc., regulates that; but on the amount of food and labor it has taken to bring the animals into marketable condition, and the amount and value of manure made. If beef increases in price at the rate of 50 cents per hundred every month, or if you can improve the quality of your cattle at that rate, it will pay to stall-feed them through the winter with corn at 75 cents per bushel, provided always your stalls are warm and your cattle properly cared for, and you have forage of your own growing to feed them."

"A farmer of large experience tells us he fats his beef in summer, and only calculates to have them hold their own, and be ready for sale when the market suits him;

and he calculates that four quarts of meal, with good pasture in summer and early autumn, will make as much beef as eight quarts of new corn-meal, with the best of hay, in cold weather."

What has been said of beef, will in some respects apply to mutton. In making this meat, it is important to keep the animal always in good thrifty order. Its size and value, and the readiness with which it may be fattened, depends largely upon an always improving condition, yet this fact receives not a tithe of the attention which its importance demands among sheep-keepers. It has recently become a practice with many farmers to buy in autumn considerable flocks of sheep, for the purpose of consuming their coarser grains and forage—selling them in the spring, or summer after shearing, for mutton. The profit of this course depends to a considerable extent on the price paid at first, and the condition in which they are or may be put while at pasture. If brought to their yards in prime store condition, it will require but a small amount of grain, with good hay, to ensure a good product of wool and a fair marketable condition after shearing. Some feed largely on peas and pea straw, others depend on oat and wheat straw, with a mixture of oats and corn; those who grow beans, find the straw of considerable value, while those who have plenty of good early cut clover hay need no other feed to keep their flocks in as good order as they should be for breeding. But to grow prime mutton, and get the best profit of wool beside, we must take the lamb at the beginning, and keep it always in thrifty growing condition until three or four years old, when it will be a third or one-half heavier than under the usual treatment, and will have produced a like increased amount of wool, and will now sell at double the price of the other.

The making of mutton by winter feeding requires shelter, protecting from wind and storm, but dry and well ventilated; convenient access to water, and close attention to the supply of their wants according to their appetites, which ever vary with the weather. A change of food is of advantage, and we believe that root crops will be found profitable when they overcome the prejudice held against their culture and use by many of our enterprising farmers. Some experience is also requisite—no one can be so well acquainted with the care of animals as not to learn more every week he feeds them—and good judgment in buying and selling is always a pre-requisite to profit.

SINGULAR FREAK OF A COW AND PIG.

MESSRS. EDITORS—Some weeks since I purchased of Mr. Petee of Lakeville, Conn., a Berkshire pig, then about six weeks old. She was put into a pen by herself, but being very uneasy, managed to effect her escape, and took up her abode by the side of the cow, making her nest in the stall with her. No notice was taken of this strange freak of her pigship, until a few days after, when our usual quantity of milk was observed to decrease without any perceptible reason. The pig was, however, noticed to grow very rapidly, and to become more strongly attached to the cow, while she in turn lowed and became very uneasy if the pig went outside of the barn. The milk finally decreased at such a rapid rate, that we were obliged either to buy or separate these two singularly firm friends, as one night, on going to the barn, the pig was found busily employed nursing. This at once explained the mystery, when the pig was of course entirely removed from the barn, but it was many days before the cow became reconciled to the loss of her pet, mourning for her as if for a calf. Others may have noticed such an attachment, but to me it seemed a strange freak, both on the part of the cow and the pig. *

Springfield, Mass.

[For the Cultivator and Country Gentleman.]

FOOT DISEASE IN HORSES.

My horse, a noble and useful fellow, very suddenly became lame, and on examining his left fore foot I discovered that the *heel of the frog* was bruised and bleeding. I quit using him immediately, and turned him into pasture, about the middle of August. I did not notice him for a week, and when I examined his foot the *frog* had become *rotten*, and was full of maggots. I then stabled him, and washed the foot every day with strong soap and warm water, and then applied a liniment. I kept up this treatment for more than a month, and by the use of *turpentine* kept the foot clear of maggots. Still there was no improvement in the disease, and the frog completely rotted out, leaving "proud flesh," which was easily irritated, and kept sore.

For nearly three months I had lost the valuable services of my horse, and I began to entertain fears that I might lose him forever. I now determined to put a shoe with a cork $1\frac{1}{2}$ inches high on this foot, so as to lift the sore entirely from the ground. A new frog soon formed after the first rotted out, which in like manner became diseased and rotted off—this, however, before I had put the high-heeled shoe on.

After putting on the shoe I had the foot washed clean *every* morning, and then applied pulverized blue-stone (or rock vitriol) and lard. In ten days my horse was *perfectly* well—the high-heeled shoe removed, and my horse restored to me thoroughly sound, and I have not lost a day of his valuable labor since.

Was it a "stone bruise?" Did the high-heeled shoe or the blue-stone and lard effect the cure?

I hope this article may prove valuable to all who may be so unfortunate as I was in the loss of a good horse's labor, and fortunate to them that, profiting by my experience, the loss may not be so great.

Stanford, Ky.

H. T. H.

[For the Country Gentleman and Cultivator.]

CONCRETE HOUSES.

I notice in the last number of THE CULTIVATOR an inquiry with regard to concrete buildings, mode of constructing, &c. I have had no experience in this mode of building, having had no occasion to build in any way, but have been much interested in the experiments of others, and think, *if properly managed*, it will prove entirely successful; but if great care is not exercised failure must result. Without materials of the best character, it is useless to make the attempt. I think if A. S. Loveland will send 87 cents to Fowler and Wells of New-York, for a little work entitled, "Home for All," by O. S. Fowler, he will consider it money well spent, as it contains complete directions for erecting concrete walls, and several plans for houses, and is a very entertaining book. I should think it invaluable to any one about to erect a building of this material.

I have before me an engraving and description of a barn erected by Wm. G. Barnard, of Bellaire, Ohio, which appeared in the Ohio Cultivator some time since. The building is 38 by 52 feet, 20 feet high to the eaves, and 32 feet high to the top of gable. The entire cost of the barn completely finished, was \$599.00. Cost of lime \$40. Cost of collecting all other materials, sand, gravel, and stone, and building walls, \$184, making the entire cost of the walls only \$224, while a brick wall, according to the statement of the writer, would have cost \$980. He also states that "In many locations the walls of this building would cost much less. For instance, laborers were employed at \$1 per day; whereas, farm laborers are paid about \$12 per month. Then, again, the lime cost 8 cents per bushel, when it can be burnt at a convenient point to

the building, at a maximum price of 5 cents per bushel. All the stone and gravel was hauled a considerable distance, which increased the cost very materially. Any inquiries addressed to Wm. G. Barnard, Bellaire, Ohio, will also be promptly answered."

I have seen it recommended to prepare blocks of stone of the concrete, in molds; as soon as the blocks are sufficiently hard, remove the molds and fill them again, and if desired, place blocks of wood in the centres of the molds, which, when taken out, will leave an opening in the block, and thus secure a hollow space in the wall, which will make the building warmer on account of the body of confined air. TYRO LINGO. Salem, Ohio.

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[For the Country Gentleman and Cultivator.]

POULTRY KEEPING BY CHILDREN.

EDS. CO. GLNT.—I see that your Poultry Department is better filled than it used to be, and I am glad of it, as I am quite interested in poultry. My brother and I, (he is fifteen and I fourteen,) have kept fowls for over three years on our own "hook." We make them support themselves, and give us spending money for our own use besides. We have to buy all their grain, except that we usually raise a little corn in the garden. We do not have any other animals, so the hens have all the refuse from the table, which, in winter, we keep in some tin thing and warm for them. We give them pure water two or three times a day now.

We sell the eggs at the store, but as they will not give us money for them, we have made an arrangement with our father by which he uses the eggs and gives us money.

My brother keeps an account of the hens. According to it, the cost our of fowls during 1862, was \$4 37, which includes 45 cents worth of corn from the garden. The receipts during the year amount to \$10 41. Total profit for 1862, \$6.04.

So we each received last year, over and above all cost, \$3 02—we divide equally.

The profits include \$2 31, the money for which we sold all our fowls, ten, during the latter part of the year.

We sold them all in order that we might get a pure kind. In Nov. we bought in New-York one cock and two hens of the Dominique variety. Are they both good layers and good sitters? They were not just what we wanted.

We have since bought three hens of another variety. I don't know what the name is. They are larger than the Dominiques, and between the two we hope to have large, laying hens.

In a country place like this, where eggs sell by the dozen, and fowls by the weight, it is not necessary to keep breeds pure; and in fact it can't be done unless they are kept closely shut up.

Only one of our hens, a Dominique, has laid as yet.

Ought hens to be fed one, two or three times a day in winter, and how much, if fed on grain alone, ought to be given to each hen?

In raising hens for early market, when is the best time to set? Is March too early? A GIRL.

Newtown, Jan., 1863.

We look to Mr. BEMENT for a reply to the queries of our youthful correspondent.

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POTATO VINE.—I wish to speak of the growth and weight of a single potato vine, one stalk only. It grew from a potato peeling, a stray eye which found a lodgment in an old well, or rather where there once was one, it having caved in some years since, and was nearly filled with stones and dirt, and was the receptacle of all small rubbish in general—also the suds on washing days. The vine grew to the height, or length rather of seven feet, and weighed just fifteen pounds. I pulled it up immediately after the frost struck it, it being at that time full of sap. It was of the Fillmore variety. It had on it several large potatoes of all conceivable shapes, having grown among the stones. I also measured a clover stalk grown on a sandy soil, which measured seven feet to the under side of the head.

B. E. C.

[For the Country Gentleman and Cultivator.]
Cotton Culture in Utah Territory.

Presuming that some items in regard to the culture of cotton in this Territory might interest your readers, I have been at some pains to obtain information on that subject, which I embody in this communication.

The cotton country proper—universally called “Dixie” here—embraces certain portions of Washington county, the extreme southern county in the Territory, and the lands adapted to the culture are the bottom lands lying along the small streams forming the head waters of the Rio Virgin river, which flow southwardly and ultimately empty into the Gulf of California. The sources of these streams are separated but a few miles from those of Sevier river, which flow to the northward and debouch into Sevier lake.

The general features of the country are very uninviting, being rough and mountainous, and aside from its adaptability to growing cotton, presents but little inducement for settlement. The grasses indigenous to the country, however, grow luxuriant, and will doubtless be made subservient to a somewhat extensive system of grazing when that section of country shall have become well settled. The first colony was established in 1852, being sent out from the great parent hive of Mormondon, whose symbol of industry is “Deseret,” the honey bee.

The settlements increased but slowly in population, there having been but seventy-three families in the whole extent of the cotton country so late as the autumn of 1861. Since that date, however, a great impetus has been given to the movement through the direct agency of “the Church,” which has sent off hundreds of individuals and families, with the assurance that they had “a call” to labor in that field of duty. Some two hundred families were thus transferred to the cotton country during the autumn of the last year, and I am informed that now there are some five hundred families resident in that part of the Territory.

The culture was inaugurated only as a *dernier resort*, owing to the great scarcity and consequent high price of the staple, and fabrics manufactured therefrom, both in the States and here. It was not expected that enough could ever be raised to make a surplusage over home consumption, perhaps not in sufficient quantities for that, even; as it was demonstrated after investigation and a careful calculation based thereon, that no greater area in the *entire Territory* than *eight to ten thousand acres* was adapted to the cultivation of the staple.

Cotton was first planted in the spring of 1862, and was found to be eminently successful, although requiring an extensive and laborious system of irrigation, in common with all operations in this Territory looking to success in agricultural pursuits. No extensive tracts or large fields were planted; a small “patch” or perhaps an acre or two at most, being tilled by each of the families then resident there. It is estimated that two hundred acres was the entire area thus cultivated, the total yield of which is calculated at seventy five thousand pounds, or an average of three hundred and seventy-five pounds to the acre. The greatest yield was thirteen hundred and fifty pounds “in the seed,” per acre, equivalent to four hundred and fifty pounds when ginned and cleaned.

The most favorable localities for the culture were at Santa Clara and Washington, about three hundred and sixty miles south from this city, and but a few miles north from the southern boundary line of the Territory.

The quality is a fair upland of which I enclose a sample to enable you to judge of the length and fineness of the fibre. There was but two gins in the country prior to the return of the “Church trains” from the States, late in the season, which brought four of the most improved construction, precisely like those in use in the Southern States. The two originally in use were made here, and were clumsy affairs, and consequently somewhat inefficient.

It is confidently hoped that with the experience gained by last season's operations, together with the improved appliances now at hand for ginning and saving the cotton, that henceforth the production will be largely increased, sufficient at least to supply the more urgent necessities of the people. At any rate the development of home resources in that respect will be thoroughly tested by the application of an extended system of labor, made effective by the industry characteristic of the working classes here.

I will say, while on the subject of the cotton country, that sorghum is also extensively cultivated there, far more than a home supply being manufactured, the surplus being exported and bartered for wheat or flour produced in Iron county, which lies immediately north of Washington, both of which stretch across the entire breath of the Territory from East to West. The farmers of the latter county find it far more remunerative to cultivate cotton and cane, than in raising cereals.

Grapes succeed in perfection there, rivaling California even in that respect, and thousands of cuttings have been procured from the latter State, as well as from this city, to start their vineyards. The vines need no protection whatever, but grow luxuriant in the open air, and produce most luscious fruit in great abundance. Apple trees likewise grow thrifly, and will succeed admirably; but peach trees are a failure, the winters being severe enough to kill them.

The keeping of bees is likewise a decided success, and efforts are being made to introduce and feed them on an extended scale. It is a remarkable fact that in no other portions of the Territory can bees be kept, as they invariably die.

I will remark *en passant*, that the famous (or infamous) “Mountain Meadow massacre” was perpetrated in the cotton country, at a point some forty miles northward from Santa Clara. This occurred in 1857, when some one hundred and twenty emigrants from Arkansas,—men, women and children—while on their way to California, were inhumanly slaughtered by the Indians. A ranche is now established within three miles of the scene of that sanguinary conflict.

For much of the above information I am indebted to Hon. George A. Smith, Church Historian and Recorder, and member of the present Territorial Council, to whose kindness and courtesy I am under much obligation.

Great Salt Lake City, U. T., Jan. 10, 1863. C. H. HOWARD.

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[For the Country Gentleman and Cultivator.]
The Way to Construct Wood-Houses.

If rain and snow were to fall always perpendicularly, and to remain where it falls, the true way to construct wood-houses would be, to leave the sides all open, and make simply a roof to carry off the water. But as snow and rain will drive horizontally, the *sides* of wood-houses must be inclosed, or the snow many times would be deeper on the wood under cover, than it is out of doors. Wood-houses, therefore, must necessarily be made tight, for the purpose of excluding the snow.

Yet, to secure good ventilation, a *flap door* should be made on each side of the wood-house, just above the sills, which may be kept open at all times except during the time when driving storms prevail. By having these flap doors near the bottom of the ranks of wood, and by piling the wood with the *ends* of the ranks towards the flap doors, the most complete ventilation will be secured; and wood may be piled in such wood-houses when it is as green and wet as it can be, and will dry out and season very rapidly, and most thoroughly, in a few months.

I have tested this manner of constructing wood-houses, and I have found it to be the best way of inclosing the sides of wood-houses that I have ever met with.

In Tompkins county I built one wood-house with tight sides and tight floor, and the wood came out after a year, mouldy and unseasoned. I then built another one with a flap door on the side, and the wood dried out very quickly.

S. EDWARD T. T. D.

[For the Country Gentleman and Cultivator.]

PREPARATION OF WOOD FOR FUEL.

Notwithstanding all that has been written about preparing wood for fuel, there is yet as much chance for improvement in this branch of business as there ever was. But few people comparatively manage economically with their wood for fuel. Almost every one who burns wood, whether he purchases it, or procures it from his own woods, sustains more or less loss in his fire wood, from the improper manner in which it is prepared. Those who have been accustomed to burn well prepared wood, and then are required to make their fires of wood which has not been prepared, are not a little surprised to find what a vast difference there is between the same kind of wood when one sample has been prepared as it *should* be, and the other prepared as most farmers usually prepare it.

The excellence in fire-wood consists in having it well seasoned and thoroughly dried before it has undergone any change, after it has been cut. When fire-wood is cut, and split into cord-wood, and exposed to the influences of the weather—wet and dry—for eight or ten months, or more, the vitality of that wood will be so greatly injured that in many instances it will not produce half as much heat as the same amount of wood *would* have produced, had it been properly prepared and properly secured. This is more particularly true of white beech and river beech, but not so much so of red beech, and of both soft and sugar maple, basswood, and all other kinds of perishable wood.

When the moisture is allowed to remain in wood, or rather when wood is placed where the moisture will not readily escape, a chemical change will soon commence which will soon end in what we colloquially term "dry rot." And every one who knows anything about getting up heat with different kinds of wood, and with wood in different conditions, knows too well to be told that wood that has lain so long that the "dry rot" has commenced will produce but little heat. And the same may be said of "dozy," or sap-rotten wood. The *life* in dozy wood is gone, and although it may be *dry*, and will burn like tinder, it gives out but little heat; whereas, had that same wood been properly prepared, the amount that is now required to get up heat enough to cook a meal, to bake, or warm a room, would have heated the stove to redness, and have burned everything black, and would have rendered the room not only uncomfortably *warm*, but as hot as a Thomsonian steam box.

This is the condition of most of the dry wood that is carried to market in most of our cities. The beech that was cut last winter or spring, and that has been exposed to the weather for several months, is, for the most part, sap-rotten and "dozy," and the maple, in most instances, even when it appears dry and well seasoned, has lost much of its vitality, and will fry and sizzle when it is burning, and will not produce half the heat that it would have produced had it been properly prepared.

Could farmers and others know exactly how much they lose in a single year by wrong management of their wood for fuel, they would be so surprised at the difference between the same wood when in a different condition, that, I think, they would abandon the present practice at once.

The True Way to Prepare Wood for Fuel.

Water will not burn readily, neither will the *sap* of any kind of wood burn even tolerably well. Therefore, in order to get the greatest amount of heat from wood, the moisture must all be dried out of it. The best and most economical manner of doing this will give us some correct ideas about the true way of preparing wood for fuel.

At whatever season of the year wood is cut, it should be split immediately, and piled up under a shelter that will protect it from rain and snow. This shelter should be open on the sides, so that the air may circulate freely through the entire pile of wood. Then as soon as any

moisture evaporates from the wood it will be carried away, and if the roof does not leak, the wood will soon become thoroughly dry, and will burn like tinder.

There is almost as much economy to be exercised in curing wood as there is in curing grass for hay. There is, in all kinds of wood, a great amount of gum, sugar and starch, which if dried quickly, will burn well and produce much heat; whereas if it be allowed to become partially dry, and then to become wet again, the vitality of the wood will become very much injured, just as hay will be injured by being exposed to the influences of rain and sunshine. And when the wood is piled in a close wood-house, where the air cannot circulate freely, it will become *sap-soaked* and *dead*, and will not burn many times as well as green wood. The sooner wood can be split into small sticks and piled up under an airy shelter, the better it will be for fuel.

Cutting Wood Short and Long.

There is great need of exercising more economy in the *length* of wood for the kitchen stoves. When wood is prepared exclusively for stoves that are designed only for warming the rooms in which they are placed, it makes little or no difference as to the length which fuel is cut. But wood for the kitchen stoves should usually be cut short—say not more than one foot long.

The economy in such a practice will be readily perceived. At many seasons of the year it is desirable to kindle but little fire—say just enough to boil a tea kettle, or to heat a kettle of water. Therefore if the wood be 20 or 24 inches long, it will require about twice the amount of wood that is really necessary to produce the desired amount of heat. If the wood be about one foot long, the fire can be made directly beneath the vessel that contains whatever is to be heated, and little or no wood will be consumed to no purpose; whereas, if it be cut long, unnecessary heat will be produced in a room, and much wood will be wasted.

But very few people comparatively think of this manner of saving wood. But if a cord of wood cut twice or thrice in two will produce as much *necessary* heat as if it were cut but *once* in two, it would be good economy to cut it short instead of procuring more wood. But when wood is needed simply to warm rooms it will be most economical to cut it as long as the stoves will receive it.

S. EDWARDS TODD.

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[For the Country Gentleman and Cultivator.]

FATTENING SHEEP.

EDS. CO. GENT.—In some of the back nos. of the Co. GENT., S. Edwards Todd gave his mode of making a lot of sheep fat, to be sold after shearing. If it will be of any benefit to any one, I will give my mode of making a lot of sheep fat for early market—say about the 1st of third month (March.) I take our common Merino sheep. I want them low, heavy set, short legged wethers, three or four years old, that will average from 100 to 110 lbs. per head. About the 1st of 12th month (Dec.) I put them up in a yard of about a quarter of an acre, with good water running through it. Here I would say it is a great advantage to have good water handy to them, as they will not go far for it in bad weather. There should also be a good shed or stable on one side of the yard, and it should be so arranged as to fasten them under the shed in stormy weather, and if there was a stack of straw in the yard it would be a great advantage. They would eat a great deal of it, and it would serve for litter for them.

I commence feeding them about a bushel of shelled corn, or, which is better, a bushel and a peck of corn and oats mixed half-and-half, and increase it to two bushels of corn or two and a half of corn and oats mixed, per day, with all the good clover hay they will eat, and salt them regular three times a week, or else have a trough of it where they can have access to it at all times.

With this manner of feeding, if they have been attended to regularly, for ninety days, I will insure them to be

fat, if they will fatten at all. I have had them gain 20 lbs. per head. I generally feed about a hundred in a lot, though fifty would do better. And if the yards have been kept littered as they should be, there will be a pile of manure there that will pay for all the trouble of feeding and taking care of them.

T. HALL.

Mount Pleasant, Ohio.

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Fruit Grower's Association of Western N. York.

The Winter meeting of this association was held at Rochester, commencing on the 15th inst.—the President, H. T. BROOKS in the chair.

A very fine collection of 50 varieties of Winter Pears, was exhibited by Messrs. Ellwanger & Barry, including Easter Beurre, Willermorze, Jaminette, Doyenne d'Alencon, St. Germain, McLoughlin, Josephine de Malines, Lawrence, Winter Nelis, Beurre d'Aremberg, Epine Dumas, Beurre Gris d'Hiver, &c. Fine collection of King of Tompkins county apple, from Col. E. C. Frost, and another from H. N. Langworthy. Fine samples of Catawba grapes, looking as fresh as when gathered, from Judge Larrope—also well preserved samples of Isabella, from Dr. B. Spence. Nice collection of 14 varieties Winter Pears, from W. B. Smith of Syracuse, including some of those already named. Collection of well grown samples of Baldwin, Pomme d'Or, &c., by H. N. Langworthy. Five varieties of apples from H. T. Brooks, including good samples of Northern Spy, Peck's Pleasant, &c. Some apples of Southern and Southwestern origin, as the Nick-a-jack, New-York Pippin, Red Rambo, &c., exhibited by Chas. Downing.

The President gave a very fine valedictory address on the history of the apple, giving a great deal of information on its early history, and tracing the origin of many of the noted sorts.

The following gentlemen were elected officers for the present year:

President—STEPHEN A. AINSWORTH.

Vice-Presidents—H. E. Hooker, Rochester; Judge Larrope, Hammondsport; C. L. Hoag, Lockport.

Secretary—James Vick, Rochester.

Treasurer—W. P. Townsend, Lockport.

Ex. Committee—P. Barry, J. J. Thomas, C. L. Hoag, W. B. Smith, and S. B. Garratt.

From the discussions which took place during the several sessions, we give the following on the

Best Three Native Grapes.

QUESTION.—Which are the best three native grapes for home consumption?

Judge Larrope would propose the *Catawba*, where it can be ripened. At Hammondsport, at the head of Crooked Lake, we can ripen the *Catawba*, owing to our steep hill-sides—it would ripen better than the *Isabella* with them. There were last year raised over two hundred tons where eight years ago the first grapes were planted, and there are enough now planted to produce 2,000 tons per year. We can make better wine than they can at Cincinnati. Our grapes sell for from two to five cents per pound more than those from Cincinnati. Wine made from our grapes requires no sugar. The frost keeps off with us a month longer than anywhere around us. The next to *Catawba* was the *Diana*. It was the best keeper of almost any. The third was the *Delaware*—a good wine grape, but would not keep well.

Mr. Salter.—The three best grapes for home consumption—1st, *Delaware*, best for this section—good grower, ripens well, and keeps tolerably. Next, *Diana*, best in quality, but not most sure to ripen—with neglect will over bear, and not ripen evenly—with good culture will ripen well—best keeping grape we have. Next, the *Concord*—good grower, good bearer, ripens well everywhere, but does not keep very well. These are the three best probably for market also.

W. B. Smith—The *Delaware*, it is said, sometimes does not keep very well, but his experience is that it is a first rate keeper, far better than the *Isabella*. Thinks it the best grape there is. Would take as four sorts, the *Hartford Prolific*, *Delaware*, *Diana* and *Concord*.

Chas. Downing—The *Delaware*, *Crevelling* and *Allen's Hybrid*, the best three. The *Delaware* will stand the most frost of any kind.

Mr. Olmstead—Picked the *Delaware* on the 11th of Oct.—has them yet—they are good now, though somewhat shrivelled.

Judge Larrope said it was so thin skinned that it would in some cases burst and become a prey to wasps and ants. This would be an objection to using it for market. It would not, in his opinion, stand transportation to market. The *Diana* is the best keeping grape we have.

The President put up a few *Delaware* grapes in boxes, putting thick layers of newspapers between the grapes—they kept as well as the *Isabella*, but not as good as the *Rebecca*—some poor grapes among them.

Judge Larrope said he had nothing to say against the quality of the *Delaware*, but its keeping quality was its objection.

Mr. Hoag would take *Hartford Prolific*, *Delaware* and *Diana*. The *Rebecca* was very productive when old—would add the *To Kalon* and *Concord*.

Dr. Spence would say, where the *Catawba* can be ripened well, there would be none better than the *Catawba*. *Delaware* and *Diana* would be the next two. The *Catawba* ripens well with us—always in fact.

Judge Miller, New Haven, Ct.—The *Catawba* is the most valuable grape where it can be ripened. On Kelley's Island it grows finely. He found the Cleveland *Catawbas* much finer than those at Cincinnati or Missouri. Mr. Kelley packed for him in small boxes, and sent to him in New Haven in good condition; put them in a cool place, and for all that long winter had them in abundance, and on 20th March he sent to Prof. Silliman and others, as fine specimens as one could have. I think its keeping qualities are owing to its thick skin. Thinks open water an indispensable condition to its perfect ripening. Has raised hundreds of pounds in Rochester, but never got any ripe.

Judge Larrope—There are thousands of acres around the lakes in Western New-York, suitable for raising the *Catawba*. The *Isabella* grape is much better with them than around Rochester.

Mr. Moody—The *Delaware* always ripens, and does not run all to wood—just right in this respect—*Delaware*, *Diana*, and *Concord*, would be his three grapes. The flavor of the *Diana* was the best of any he ever eat. On Kelly's Island, where the *Catawba* rots badly, the *Delaware* does not rot. The *Diana*, as the vines get older, ripens evenly, and is very valuable indeed.

Mr. Maxwell, Geneva, said the *Catawba* for children's use was not as healthy and digestible as the *Delaware*, *Diana*, *Hartford Prolific*, and others. The hard pulp was an objection to its use for children. They much preferred the others to *Catawba* obtained from Hammondsport.

Mr. Frost, Rochester—The best grape he ever eat was the *Rebecca*—the three best are the *Hartford Prolific*, *Delaware*, and *Diana*.

Dr. Jackson was not a fruit-grower, but knew something of fruit-eating, having charge of a large establishment for invalids, who have eaten two tons of grapes this fall—have used *Delaware*, *Diana*, *Catawba*, and *Isabella*. The *Catawba*, grown at Hammondsport, could not be eaten—would as soon feed them bullets as *Catawba*. They could eat *Delaware*, but the *Isabella* was decidedly the best for persons suffering from stomach diseases. The patients soon grow tired of *Delaware*—of *Isabella* they never grow tired. For food, no grape is better.

Judge Miller—The *Catawba* pulp, is a great objection to it. A friend of his has a large viney, and he finds the fruit can be eaten with perfect freedom. The *Delaware* is eminently free from pulp, and thus healthy.

HORTICULTURAL INQUIRIES.

Grafting the Peach.

I wish to know whether peaches can be grafted the same as apples, in pieces of roots, or the best way to graft them on peach, for I am satisfied it is hard to raise sound trees by budding, for this reason—where the seedling stock is cut off it seldom heals over sound, in time leaving too much of a brown or dead place in the main part of the seedling stock, the very foundation of the tree. I care not how fine the tree looks from the bud up; if the seedling stock under it is once brown in the heart, the tree is not sound. The same with some cherry trees and many of the dwarf trees—thus so many failures with them.

Union City, Ind.

G. G.

Peaches cannot be root-grafted in our climate. The difficulty our correspondent speaks of may be obviated by budding into small thrifty peach stocks, near the surface of the ground, and pairing off the stub the following summer, causing it quickly to heal over. The small amount of dead wood thus left in the centre of the tree will be no detriment whatever if encircled in plenty of strong, healthy wood. Unlike animals the heart of a tree is not the vital part, and may be entirely cut away, or replaced with as much sawdust, without at all affecting its health or vigor. But a large wound occasioned by an old stock is so long healing over that such trees are of little value.

Grafting, and Saving Girdled Trees.

In an article of yours on grafting, in Patent Office Report for 1856, you speak of grafting old apple trees by cutting off large branches, and grafting into the stumps. I wish to ask how such stumps, from three to six inches in diameter, are prepared for the insertion of the scions after being cut off? Is it by splitting across the face of the stump, as in a smaller stock? (1.)

In root-grafting roses, should the scion and root be fitted together with a *tongue*, as in root grafting the apple? (2.)

A person here has had some 50 very fine thrifty young apple and standard pear trees girdled by some miscreant in human form. The trunks of the trees are from two to five inches in diameter, and the bark was shaved off with a knife entirely around the trunks, leaving a denuded surface from 15 to 20 inches in length. About *one-tenth* of the *inner bark* still remains, and in some places connects the bark above and below. They were immediately coated with grafting wax, over which a cloth was closely wrapped. Do you think it possible that any of those trees might survive after such a skinning process? Would it be best to insert scions connecting the bark above and below? (3.)

Can the Quince be propagated by either cleft or root grafting on large or small stocks, as *surely* as the apple, and in the same way? I have some Angers and Fontenay quince stocks of various sizes, which I wish to graft with Rea's Seedling. (4.) A. BABCOCK. Union Co., Ill.

1. It is of course always desirable to make as small wounds as possible; but where large ones are absolutely necessary, they may be most quickly covered with new wood in the following manner: Set the grafts at the outer edge an inch or two apart, all around like a crown. They will grow rapidly, and in a few years cover the whole cut surface. There are two ways of setting them; one by splitting across into the wood, and inserting them in the usual way for cleft grafting; the other, by setting them between the bark and the wood, making a small slit in the bark for this purpose, and shaving the inner side of the graft flat. We have not experimented enough with these two modes to say which is the best.

2. Will some of our rose-propagators please inform us what mode they have found best after full trial. We have observed different practices among them.

3. If there are several streaks of bark left, the trees will probably grow and do well. If there is but little left, it would be well to insert connecting scions, according to the mode described on page 333 of *Rural Affairs*, vol. 1. For the sake of convenience we copy the description of that mode.

A number of young shoots or portions of the branches of apple trees are first provided, and as they are wanted, are sharpened in the form of a wedge at each end, being long enough to connect the upper and lower portions of the bark, separated by gnawing. A chisel, the breadth



Fig. 1. of which is about equal

to the diameter of the shoots, is then driven into the bark, (say half an inch from the gnawed edge,) both above and below, and the prepared or sharpened shoot is



Fig. 2.

then firmly pressed at each end into the cut made by the chisel. This is easily done by first bending the shoot outwards at the middle, so as to allow each end to enter, and then crowding it in again. The place must be then well waxed. The edge of the chisel must be placed so as to make a horizontal line in the bark, and then be driven nearly vertically upwards or downwards for the upper or lower parts of the bark. When the shoot is placed in the cut thus made, some portions of the line between the bark and the wood in both tree and shoot, must necessarily coincide, and as a consequence, the two parts almost invariably adhere and grow together—there is scarcely ever a failure. Fig. 1, represents a girdled tree; Fig. 2, the same with the shoots inserted; and Fig. 3, is an enlarged section, showing the position of the sharpened end of the shoot when in its place. The great advantage of this mode consists in the rapidity with which the work may be done, and the difficulty of displacing or knocking out these shoots when once in. There should always be a few stout stakes driven around each tree, to keep off plows, harrows or cultivators which might otherwise strike the tree and loosen these shoots.

The shoots used were about one-fourth to one-half an inch in diameter when applied, and they had already tripled their original size. Probably larger ones would be better, and the more numerous they are the greater will be the security, and the sooner they will grow and unite in one solid trunk.

4. They may be propagated as proposed, and if well done there will be scarcely a failure.

Pears for Market, &c.

1. My location is sixty miles south of Chicago. I have a farm of some sixty acres, which has cost about \$4,000. It does not pay well at all, because of the low prices of produce—have rented at the halves for a few years, while I have attended to bees, orchard, &c. I want to get in something else; have thought pears might be that thing. What do you say? Can you suggest anything better? If not, please give me a list for 100 trees (would prefer part dwarfs, as they pay soonest,) that promise to pay best in this location. (2.) Do any particular sorts do best on White Thorn? (3.) Will it do to graft pears on to apple? Books say no; neighbors with some experience say yes. What say you? (4.) Is there any harm in leaving the little mounds thrown up about young trees to keep away mice? F. S. Will County, Illinois.

1. It is difficult to give particular advice for every locality; we can therefore only state, in a general way, that experiments for some years should be first made to determine the adaptedness of dwarfs or standards, or the different varieties, before extensive plantations are made. These experiments may have been already performed in

that neighborhood; if so, their results will indicate the course to be pursued better than any advice we can give. Dwarf pear trees have only partially succeeded in the west, and they may or may not answer in that place. Among those most likely to succeed are, perhaps, the Flemish Beauty and Urbaniste, double worked, and Louise Bonne of Jersey, Buffum, Jaminette, Long Green, Beurré d'Amalis, Beurré Diel, Beurré Hardy, &c. 2 & 3. The White Thorn is an imperfect stock at best, and although trees occasionally succeed well upon it, those who approve of the apple stock for the pear have probably not tried it for many years, or judge only from isolated or exceptional cases. 4. The only objection is that they cannot remain there if the trees receive proper cultivation, and if they become covered with grass in the summer the mice may follow them up to the bark the succeeding winter.

A Problem for Grape-Growers.

MESSRS. EDITORS—For many years I have been a careful student of the sayings and doings of our Horticultural Doctors. Circumstances not necessary now to mention, have prevented a very extensive experience, but I have endeavored to have my eyes and ears always open as to what was going on among the great lights and practical men of the Horticultural profession.

I have been looking for solid ground upon which novices like myself might stand, and points of departure from which we might start and follow straight ahead to the goal of sure success; but I am as yet disappointed, and nearly as deep in the fog as ten years ago.

It has been said that in a "multitude of counsellors there is safety." That certainly was never meant to apply to fruit doctors. Look at the sayings of the late convention of fruit-men in Illinois. Compare them among themselves, and then with other great teachers east and elsewhere, and tell me, don't you pity us poor scholars?

How many leading fruit-men are there who perfectly agree on a half-dozen points as to the management of the various kinds of fruit trees? I begin to think that every man must fight the battle for himself.

I want to plant a vineyard for the production of wine; and I have a problem connected therewith, which, if Mr. THOMAS or any of your correspondents can answer satisfactorily, will entitle him or them to my lasting gratitude and admiration, and not only mine but of hundreds of others who are in the same "fix" as myself.

Given—a climate of variable nature, extremes of heat and cold, wet and dry—a soil, clayey loam, black for the first foot, yellow clay for the next ten or more feet, but rich enough to raise the tallest kind of wheat or grass, upon one season's exposure to frost and air; retentive of moisture—draining tile impossible to be had at reasonable prices—labor \$1 per day—land \$10 to \$20 per acre. Now how shall I proceed to produce *the greatest number of pounds of grapes of best quality, at the least possible expense?*

You understand the problem, gentlemen? "I pause for a reply." HAWK-EYE. Melrose Farm, Iowa, Jan. 19

If there is much vegetable mould in the top soil, it would probably cause too free a growth in the vine; it may be better therefore to select such localities as have the yellow sub-soil nearer the surface, or else to trench-plow deeply, so as to intermix the two. Our correspondent can judge better by being on the spot, whether underdraining is absolutely necessary. We have seen a soil in Indiana, too wet for the successful growth of the grape, made to produce very heavy crops, by plowing between the rows of vines, so as to leave a deep dead furrow midway between them. The rows of vines were twelve feet apart, were trained on trellis, and gave crops exceeding anything we have seen about Cincinnati. If these dead furrows are insufficient, we think our correspondent will

find well-made brush drains to answer an excellent purpose, and to last a number of years.

Doctors will, of course, always disagree, as long as palates, treatment, localities, and circumstances differ. It cannot be otherwise, and it ought not to be; for this very difference enables us to decide what to do under our own peculiar circumstances. The proceedings of the Illinois Horticultural Society, to which Hawk-Eye refers, were quite as unanimous as those of the Western New-York Society at Rochester, whose proceedings have lately appeared in this paper. Yet we find, with regard to some varieties, there was nearly unanimous expression in their favor,—showing that they succeed under nearly all circumstances. With other sorts there were conflicting opinions, indicating certain special influences not always present. A third list might have been introduced, that would have brought forth a unanimous expression of condemnation. All these are valuable in assisting beginners to make up their minds; but after all, it is necessary to experiment to some extent in every locality, to determine what is likely to be most successful. Those who have large means may make extensive trials, as they can bear large failures; with more limited means, one should be cautious and feel his way.

Management of Orchards.

A new subscriber and a green hand at farming, has just bought a farm with two large orchards—one of them has been planted about twenty-five years, and for the last ten years has had nothing done to it—the trees have much dead wood and thick limbs—much dead and rough bark on them, and the ground a heavy sod. Will you be kind enough to inform me what to do with it? Also, whether saw-dust, principally of white oak and chestnut, will not be good to haul into the barn-yard if got very convenient—also to put around trees—also the objections to pruning in January.

BEGINNER.

York County, Pa., Jan. 1863.

The present is a good time to prune old orchards. The wounds, if over an inch across, should be covered with some composition—thick paint will do, but a mixture of tar and brick dust is cheaper, better and more durable. Trees pruned in winter, or before the buds swell, will not be checked in growth by the operation. Pruning in summer, or after the leaves have expanded, unless very sparingly done, always checks the growth of the tree, but the wound heals more readily. The orchard alluded to should have all the dead limbs cut out; and where the branches are very thick, thin out the crookedest and most stunted parts, so as to leave them equally distributed throughout the tree. Avoid the common error of trimming up, and leaving long, bare poles within the head; but rather thin in from the outside. Use good judgment, (without which no person should trim an orchard,) and the operation will not be likely to go amiss. Make as few large wounds as possible, and no projecting stumps.

If the orchard is plowed, it should be done shallow, to prevent breaking the roots, which, after ten years rest, may be near the surface. The injury from this cause, however, is commonly much over-rated. If the orchard is kept pastured short, a broad-cast annual top-dressing of manure in autumn or winter, may be quite sufficient and best.

Saw-dust, well dried, makes a good absorbent for liquid manure when spread in yards. The only use of saw-dust placed around trees, is as a mulch, or to keep down weeds where cultivation cannot be given. There is nothing enriching, but in applying it, it must be remembered that a little heap around the foot of the trunk can be of no value, but that it must be spread about as far as the roots extend, which in all established trees is as far each way from the stem, as the height of the tree; that is, for a tree ten feet high, there must be a circle of saw-dust about twenty feet in diameter, and so on for other heights.

[For the Country Gentleman and Cultivator.]
VARIETIES AND CULTURE OF BARLEY.

E. L. H. in your Jan. 8th issue, makes the inquiry—What is the best kind of barley to raise—two or four-rowed? I have often heard the same question asked, and many different opinions expressed, many supposing they had proved the four-rowed superior by counting the number of grains per head of each variety. But actual experience proves that this is not the case. I never saw nor heard of a case where a fair trial was made, that the two-rowed variety did not give the best yield. A single head of the four-rowed presents by far the finest appearance, the grains being larger and plumper, besides containing a greater number of grains, having at times three and even four-fold the number. Still the two-rowed more than makes up for this deficiency in number of grains to the head by the greater number of ears or heads to the same surface of ground; besides the heads of the two-rowed variety are more uniform in size. The heads are always nearly of the same length, and have very few blighted grains, while those of the four-rowed are often mere bits of heads of one-quarter the length of others of the same variety. The cause of the thicker growth of straw of the two-rowed is the greater aptness of this variety to stool, sometimes a dozen or even more stalks originating from the same germ.

It has been thought by some that the two-rowed variety was more injurious to the soil than the other, on account of the greater amount of straw taken from the same surface; still the greater the amount of straw, the larger will be the pile of compost with which to replenish the soil. The straw of the two-rowed barley is almost universally the tallest, which makes it far easier of harvesting as every one is aware of, who has undertaken to harvest the short chubby four-rowed, especially on lumpy uneven ground, when the shortest of the straws with their heavy heads get between the lumps, defying the rake or any means to get them out. In the culture of no grain does it pay better to have a smooth even surface, than barley, or at least in harvesting.

There is said to be a difference in the value of these two varieties for malting purposes, the four-rowed making a malt sooner, and being a little better. The difference however is but slight, buyers paying sometimes a slightly advanced price for the four-rowed. With us 20 bushels is about the yield per acre, although thirty and forty is not an uncommon yield. In the year 1860, I helped measure the yield of one acre, which was sixty-seven bushels. The ground on which it grew had been planted to tobacco the previous season, the soil for the tobacco of course being made exceedingly rich; this, together with the culture which the tobacco received, rendered the soil is an admirable state of tilth for barley the next season. This was the finest acre of grain of any kind which I ever saw, the grain standing over five feet in height, and perfectly loaded with long plump heads. It was of the two-rowed sort.

Barley succeeds best on a rich well drained soil which had been in corn, beans, or some hoed crop the previous season. It will not do well on sod with us; in fact I never saw a good piece of barley which had been sown on sod, not even doing as well as oats, for oats will do very well on sod plowed the previous fall, while barley will not.

There is no grain which needs as much care in harvesting, to secure a good price, as barley, as the purchaser looks more at the brightness of the berry than to plumpness or freeness from foul seed, &c. And I think I may here say, that the many farmers along the east side of Cayuga Lake are wofully careless in harvesting this grain. I have seen acres and acres which have been cut with a reaper, and allowed to lay in the gavels for many days through many hard rains, the only attention which was paid to it being to turn it over once in a while to keep it from rotting. This of course almost ruins it for malting purposes or anything else.

Barley straw will heat quicker than almost any other, and should therefore be secured as soon as possible from the wet. Binding and shocking is resorted to in a great degree by the farmers west of the lake, and they are repaid for their trouble by an increased price for this grain. If a buyer can get a part of or whole boat-load of prime barley, it will of course pay to give an advanced price, but where one farmer's crop is bright as gold, and the next almost black, it will not pay to give a high price for the one to mix with the other. Many put up in gavels before injured at all by the wet, but in so small gavels as to be wet through to the ground by any ordinary heavy rain. Still if the barley be taken (whether cut by reaper or cradle,) when it is partially cured or dried, and put in quite large well made gavels, it will take no injury, and the straw and grain come out almost as bright as though bound and shocked. Even the straw, to say nothing of the grain, will pay for all extra trouble, for in my opinion barley straw is the best of straw for wintering stock—sheep even, if care be taken to separate the chaff or beard from the straw while thrashing, so as not to injure the quality of their wool.

Winter barley is sown to some extent here, and to a greater extent west of the lake. Some immense yields have been had, and it is generally quite profitable if it does not winter-kill. It must be sown however in a protected situation, as it is almost certain to winter-kill badly if sown in exposed situations. It can be sown after wheat-sowing has been done. Still its liability to winter-kill will always make it uncertain as to a full crop.

In my opinion there is no better variety of barley to sow than the ordinary two-rowed variety, and I think if E. L. H. will give each variety a fair trial, he will never sow the four-rowed but once.

E. A. KING.

King's Ferry, Cayuga Co.

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[For the Country Gentleman and Cultivator.]

ABOUT POTATOES.

MESSRS. EDs.—I have been for some years paying particular attention to the culture of the potato, having as objects in view, the attainment of desirable qualities in the potato itself, and the avoidance of the rot, so often disastrous to the crop. After raising many kinds of potatoes, and experimenting in numerous ways of planting, &c., I have arrived at the conclusion, that cultivators need have no fear of the rot, if they will firstly, avoid old and "worn out" varieties, and plant only new and vigorous kinds, those lately derived from the seed. It is well known by intelligent cultivators, that any given variety of the potato will deteriorate year by year, until it becomes nearly worthless. Bear this fact in mind, and change often the old varieties for new seedlings.

Secondly, avoid clayey soil as you would the pestilence. Potatoes require a dry gravelly, or sandy soil, and will do well even on a rich loam, if thoroughly drained, but I have never known a *good* potato to be raised in clay. There are other influences undoubtedly, local or general, which affect more or less the potato crop, but the cultivator who attends strictly to the above mentioned means, need have little fear of spec-tators at digging time.

Having attended to these matters, the next object is to get as large a yield as possible, without detriment to the tubers. I have this year raised three hundred bushels per acre, of very fine potatoes without manure, at a cost of less than eight cents per bushel, and should you think this worthy of a place in your most worthy paper, I may at another time give you my mode of planting and cultivating this important crop.

As to kinds, I have this year raised principally of Mr. Goodrich's seedlings. The Garnet Chili, and Pink Eye Rusty Coat, I consider unsurpassed for table use, and they yield better than any *good* potato I ever raised. The Cuzco, though not so fine for eating, is most desirable for stock, on account of its enormous yield.

I think the community owe Mr. Goodrich an eternal debt of gratitude, for his labor in producing these valuable esculents. J. H. JEWETT. Moravia, N. Y.

FOREIGN AGRICULTURAL ITEMS.

PREPARED FOR THE COUNTRY GENTLEMAN.

AN INTERNATIONAL EXHIBITION of Stock and Implements is to be held next July at Hamburgh—amount of offered in prizes about \$17,000.

THE "Lily of the Valley" is such a favorite flower in England that it is calculated that 50,000 pots of it find a market annually in London alone.

THE SHORT-HORN HERD of the late Jonas Webb,—that of Mr. Ambler of Watkinson Hall, Halifax,—and that of His Grace the Duke of Montrose, are announced for sale. The first mentioned, amounting to about 150 head, is to be disposed of in two lots, one April 15th, and the remainder July 15th.

WHEAT was sent from the United States to Great Britain during eleven months preceding Dec. 1, 1862, to the amount of nearly 27,000,000 bushels against about 17,500,000 bushels during the same period in 1861—and Flour to the amount of 24,430,000 cwt. to Dec. 1, last year, against 3,500,000 cwt. to same date the year before.

GUANO, owing to its high price, and the manufacture of other fertilizers, is yearly diminishing in demand among British farmers. During the eleven months preceding Dec. 1, 1862, there were imported into the United Kingdom only 92,949 tons, against 157,457 tons for the same period in 1861.

Eggs are either constantly growing in popular favor, or falling off in production, in Great Britain, which consumed them from other countries, in 1862, at the rate of 225,489,000 a year against about 202,000,000 in 1861. English farmers don't like to "fash themselves" with chickens.

FLAX AND WOOL, owing probably to the lack of Cotton, were imported into Great Britain last year to a much larger amount than in 1861,—there having been an increase in the quantity of flax up to Dec. 1, of nearly 40 per cent. over the imports of the previous year to the same date,—and in Wool of over 14 per cent.

THE RAINFALL at Edinburgh for the year 1862, was 27.58 inches, or only about two inches above the average of the last fifty years. The apparent wetness of the summer is probably to be explained by the fact that the sky was frequently obscured, with a low range of temperature, and consequently a diminished amount of moisture was removed by evaporation. August and October were comparatively wet months; hence the damage sustained by the grain crops, and the difficulty experienced in harvesting the corn and potato crops, which retarded the seeding of the land with wheat.

SCOTCH CAUTION in crop estimates is illustrated in the following from a recent writer: "A friend used to tell me how he had observed the great caution of farmers in any admissions about their crops. When they used to come down to make purchases at his stores, if the question was asked, 'Well, John (or Saunders,) what sort of return have you this season?' the answer was generally given in one or other of three negatives, which, however, he had come to interpret for himself, and know the value of. The first and lowest form of the answer to his question, he used to say, was, 'Weel, I've seen waur,' and that he found he was safe to put this down as meaning middling. The second, 'It's nae that ill,' he took to imply that it was pretty good; but when the third form was reached, 'It's na that ill ava,' he was sure that it had been very good, abundant even, though still the negative mode of admission was adopted, not the open, direct and hearty."

MAPLE SUGAR MAKING.

EDITORS CO. GENT. AND CULT.—The production of Maple Sugar being of importance to the Northern man in these times of trouble, I wish to benefit the producer, by giving through your columns, my own experience of an improved arch for boiling sap in sheet-iron pans.

Three years since I was under the necessity of making a new arch, and not having stone that stand the fire well, I concluded to try a sheet-iron arch. I made a pattern out of wood one and one-quarter by one and one-half inches, three feet three inches long, and one foot six inches high, and had three castings made after the pattern, which I call frames.

I took my three frames to the tin and sheet-iron manufacturer, for the rest of the material and his help. We placed the frames far enough apart for the edges of the pans to rest on the frames, the edges of two pans resting on the middle frame. For the sides we took a piece of sheet-iron 20 inches wide, and bolted it on, turning over on the top of the arch about two inches, and let it project in front of the frame five inches, and in rear of the hinder frame eight inches at the top, and less at the bottom, in the form of an acute angle. We then took a piece of sheet-iron eight inches wide, rolled a heavy wire in one side three feet three inches long, which is the width of the arch, laid it across on the front frame with the wire side out, turned the ends down on the sides of the arch, and bolted it with the upper bolt in the frame. We then took another piece of sheet-iron five and one-half inches wide, laid it on the middle frame, and bolted the same as the other. For the back part we took sheet-iron large enough to reach across on the rear frame, and ten inches wide on top, and to bend over the acute angles of the sides down to the ground; bolted it to the back frame in the same manner as the other pieces were bolted on the other frames, also bolted to the sheet-iron sides with small bolts. In this last piece two places were fixed in rear of the frame, on which to set two stove pipes. For the door I will give you an improvement on mine. Take sheet-iron of sufficient width to be twelve inches when finished, roll heavy wires in each side, hang it to the piece on the top of the arch in front, by strips of sheet-iron around the wire in the front piece, and rivet it to the door, and the arch is done. The door opens by raising it with a poker and laying it back against the pan on the top, and when let back the poker should be kept under it, to keep it from slamming. The door should be long enough to turn around on the sides of the arch about two inches, which will keep the blaze and smoke from flashing out at the ends of the door.

I place my arch in the open air, and after it is leveled I fill in stone and dirt under the rear pan to within four or five inches of the pan, leaving a jog in front on which to rest the back end of the wood. I place dirt up to the arch around the outside, and it works equal to any stove. Let the wind blow high or low, there is no trouble, no loss of heat, no deep-drawn sighs nor shedding of tears on account of smoke.

As to fuel, my testimony is that I now can boil the same quantity of sap with one-third less fuel than I ever used in an arch before, while some of my neighbors who have this kind of arch, say they do not use over one-half as much as they did in the common arch. The cost of an arch for a double and a single sheet pan is about \$10, and for two double sheet pans a little more—the only difference being the quantity of sheet-iron for the sides; while the cost for an arch for one double sheet pan is considerably less, as it requires only two cast frames. The arch, being put together with bolts, can be taken apart in a few minutes, and then it can be stored away in a very small place. After the sugar season is over, I take warm lard and brush or rub the arch over on the outside, which prevents the rust from injuring the iron, which if properly taken care of will last a long time. CHARLES GRIFFIN.

Stamford, Delaware Co., N. Y.

CULTURE OF HEMP.

MESSRS. EDITORS.—I wish to renew an inquiry which I made in the Co. GENT. of Oct. 30, 1862, and to which no answer has been given, in regard to the cultivation of Hemp and preparing it for market. If any one has noticed the quoted prices of hemp, they will observe that its market value is now more than double what it was before the war begun. Since my inquiry was made, it has advanced \$75 per ton, and it seems to me that it ought to be a good paying crop at present prices, and while cotton is so very dear. What I most wish to know is, the method of preparing it for market, and where to procure seed.

J. C. A.

Butler Co., Iowa, Jan. 12, 1863.

We are unable to give our correspondent much information from our own personal experience in the cultivation of hemp. A number in this region have undertaken it and afterwards given it up; probably in part from a want of knowledge of its proper management. In Kentucky, Illinois and other Western States, it has been extensively and successfully cultivated for its fibre; and in the more Northern and Eastern States for its seed. A soil rich in vegetable matter is generally thought best; perhaps a firmer soil may be more suited to the raising of seed. Doubtless any good land that will raise fifty or sixty bushels of corn per acre will produce a good crop of hemp. The seed may probably be had of J. M. Thorburn, New York, and at the Cincinnati seed stores. It should be fresh, bright, and sound and not over a year old. For sowing broadcast for the fibre, a bushel and a half is enough for an acre. The time should be rather early in spring. It is both harrowed and plowed in—the latter may bury it too deep; a seed-drill would doubtless be best; and experiments to determine the best depth for growing would be valuable. It is usually fit to cut towards the end of summer; its maturity is indicated by the leaves beginning to turn yellow. If the crop is moderate, it may be cut with a stiff cradle; but better, and especially if the crop be heavy, with a short stiff scythe. To save material it should be cut as close to the ground as possible. Pulling up by the roots was formerly most common, but cutting is now generally preferred, as the roots are inconvenient to manage, and serve to enrich the ground. After cutting, it is bound when dry and placed in stacks or ricks. It is spread for rotting, like flax, on grass land—several weeks are required. A portion for early winter dressing should be rotted in autumn; but winter rotting at a lower temperature leaves the hemp brighter and of finer appearance. If not sufficiently rotted, it is harsh; if too much so, its strength is gone; the precise time may be determined by examination, the fibre separating freely from the stalk in the middle, but remaining attached at the joints. It is then gathered and placed without binding in shocks, about the size of large corn shocks, placing them very even so as not to fall down. They should be left open at the top till that part is dry, and then drawn together with a band to exclude rain. The fibre is separated from the stalks by a process similar to that by which flax was formerly obtained by hand or by means of breaking and scutching—the break being larger and coarser than for flax. Water-rotting, by placing the hemp in large vats, effects the process in ten days or two weeks, and is preferred on some accounts. The vats should be very large and under shelter. Broadcast sowing is usually preferred in raising hemp for the fibre; but drills three feet apart, admitting once cultivat-

ing with a horse, would probably give a better crop and leave the ground in finer condition.

We are unable to give much information relative to raising the seed. Some prefer planting it in hills like corn, and thinning out so as to leave but two stalks to a hill,—the staminate plants, which may be easily known when in flower, being cut out.

The old rule for determining the amount per acre, was to estimate a hundred pounds for every foot in height; thus, a crop six feet high would afford six hundred pounds of hemp per acre; seven feet, seven hundred pounds, &c.

The information we have here given is doubtless defective in many particulars; we offer it with the hope of calling out something more valuable from practical cultivators.

THE CULTURE OF BARLEY.

Will you please publish an article on the cultivation of barley—how the ground should be prepared, the time of sowing, and the best kind of seed? I have never raised barley, and think I will try some this year—say how much seed per acre?

M. V. B. B.

Barley wants a good soil—the bad success of many cultivators of late years, or as it is commonly termed the deterioration of the crop, is owing to a deficiency in this respect. Exhausted or poor land will not answer, and the soil must be in a state of fine pulverization. It should be sown very early in the spring, provided the ground can be well prepared. Sometimes late autumn plowing, with the use of the horse-cultivator in the spring, has been found to succeed well on dry soils. The two-rowed barley is generally preferred in this country, standing better, and ripening at a more convenient period, than the six-rowed variety. Many good farmers sow three bushels per acre, but if planted with a seed-drill two bushels would be sufficient; because this instrument will deposit the seed at a uniform depth, and none will be wasted, while harrowing buries a portion of it too deep, and some too shallow. The right depth is an inch to an inch and a half—if over two inches deep, it is longer coming up, and grows more feebly, according to experiments to determine this point.

Barley should be cut when ripe enough to prevent shrinking, but not over-ripe, which would cause waste. It may be cut with a cradle or reaper, and placed in cocks like hay. To prevent injury by rain, throw the heads towards the middle of the cock, the straw pointing outwards, and of such a size that the middle will be always the highest. In thrashing barley, in order to clear the grains of the short beard, it was formerly the common practice to give it a second pounding with a flail; but now the same end is accomplished by passing it a second time through the thrashing machine.

As we prefer feeding barley to having it manufactured into liquor, we have usually had it ground to feed to horses; two quarts of the ground-meal at a feeding, we think much better than four quarts of oats. The meal also makes an excellent feed for pigs.

Barley is a good crop to follow corn; if the latter has been well enriched with fresh manure, it will be just right for the barley—otherwise the ground should have a special application of fine manure, well broken and harrowed in. Wheat may follow the barley, if the ground receives a top-dressing of fine manure in autumn, before or after the wheat is sown. Or, if the barley is sown rather thinly, it is a good crop to seed down with clover.

[For the Country Gentleman and Cultivator.]

A Few Remarks on the Application of Manure.

MESSRS. EDITORS—Decomposed manure should (as a general rule,) be applied to the surface of plowed land, and immediately incorporated with the soil with the harrow. If grass or sward land is to be top-dressed in autumn, it should be done before the ground freezes, that the nutritive properties of the manure may be carried down by the rain, and the grass shelter the manure and prevent evaporation. By top-dressing on side hills without incorporating the manure with the soil, a great portion of the strength of the manure may be washed down hill by heavy rains.

Undecomposed manure will not as readily impart its nutritive properties to the soil or crops, as decomposed. If undecomposed manure is used, apply it in the spring for a hoed crop. Spread evenly and plow in, and harrow immediately, and plant before the manure begins to ferment, and your crop will receive the benefit of the fertilizing properties of the manure, rising in the form of gas produced from the fermentation of the manure. I would not advocate plowing in unfermented manure any deeper than necessary to prevent it from being brought to the surface by the harrow.

If manure is to be applied in autumn, it should be well sheltered from sun and rain during the spring and summer, that it may not lose its strength by evaporation or be drenched with water. I would not advocate the use of unfermented manure for a spring grain crop, but the year after its application to a hoed crop the land will be in fine order for spring wheat or barley, and the land may then be seeded with grass seed with the grain, for meadow.

I well recollect that some years since, when Judge BUEL edited the Albany CULTIVATOR, there was a lengthy discussion among the correspondents of THE CULTIVATOR relative to the best manner of applying manure. The Judge, becoming impatient, finally said—"Get it out—get it out in some shape," and so thought your humble servant.

M. M. HOWARD.

Lyn, C. W., Jan. 24, 1863.

[For the Country Gentleman and Cultivator.]

Products of Five and a Half Acres.

MESSRS. TUCKER & SON—At a meeting of the Glen Cove Farmers' Club on Tuesday last, the following statement was laid before the meeting and ordered on the minutes:

Statement of Crop raised on the Farm of Daniel Smith, by Charles and Ambrose Waldron.—The ground was tilled for half the product—the labor all to be performed, except manuring and plowing the land previous to seeding, by the Waldrons. Work commenced March 20, 1862. Crop gathered and sold:

Onions, 2,582 baskets, which gave when sold.—	
Loose onions,.....	221 barrels.
And.....	40,119 ropes.
Carrots,	407 bbls.
Turnips,.....	68 bbls.
Onion seed,.....	150 lbs.
Carrot seed,.....	8 lbs.
Turnip seed,.....	7 lbs.

Besides bunching their own onions they have bunched for Mr. Smith, of other onions raised on the farm, 27,858—add their own 40,119—67,977 in all—the bunching done since gathering the crops, and all finished and completed on the 16th Jan. 1863, and accomplished within ten months from the commencement.

The ground tilled was about five and a half acres. If any Connecticut or Rhode Island boys can beat this, let us hear from them, as we expect to try again this year.

The statement I hand you is for the product sold. The ropes averaged about 4c. The loose, in barrels, from \$2.25 to \$3 per barrel. R. M. BOWNE, *Secretary F. C.*

Glen Cove, Jan. 21, 1863.

[For the Country Gentleman and Cultivator.]

Cheese Making—Product per Cow.

MESSRS. LUTHER TUCKER & SON—I presume some of your readers will expect some account from me touching my experiments in Cheese making. The past season has not been so favorable for dairying generally as that of the preceding year, yet my dairy has produced 412 pounds and a fraction over per cow.

Referring to my former communications, and particularly vol. 19, page 127, of the COUNTRY GENTLEMAN, I have to say that I continue to salt my curd in the whey, as therein stated, and am thoroughly convinced that it is the right way to make a cheese. If any of your readers have given it a faithful trial and have abandoned the process, I should be glad to hear their reasons.

The cheese from which I send you a piece, was made on the 12th of September. It had the cream which rose during the night skimmed off in the morning, and is what is called a half-cream cheese. I hardly think you will call it a skimmed cheese. D. Oneida Co., N. Y.

[For the Country Gentleman and Cultivator.]

DAIRYING EAST AND WEST.

MESSRS. EDITORS—I have read with much interest the communication from HIRAM WALKER, on Dairying. While I agree with him in many things, there are others I do not. It seems beyond a doubt, that dairying will continue a paying business so long as bread is made from wheat or other grains.

Is it possible to confine it to a district or county for a great length of time? Dairying in England, in many counties, was carried on with great profit; but after a time they found that the milk lacked the requisites for butter and cheese.

There are many dairy farmers in Northern New-York that cannot keep more than two-thirds as many cows as they could six or eight years ago, and they do not make as many pounds of butter and cheese per cow as they did then.

"The Prairie States are better adapted to raising the cereals than anything else." The land here is not too rich to raise good grass, and the grass produces a good flow of milk. I have seen—and others say the same—*fifty pounds of cheese made from as many gallons of milk*, and I have yet to learn that they do better than that in the dairy regions of New-York. Many farmers here are turning from grain-raising to dairying, and are making money by so doing.

I have in my yard four cows that were well kept in Oswego Co., on a good farm, for three years. These cows give a fourth more milk, and carry more flesh than they did in that dairy county.

"The new States of the West cannot compete with us for want of adaptation of soil and climate." This does not seem to be the case, with those who have tried the experiment. As for market there is not much difference. The cheese, in Chicago and New-York markets, is quoted about the same, but with grain it is far different.

"No branch of agriculture is so well calculated to enrich the soil as this." It will not be an easy matter to convince wool-growers, pork-raisers, and cattle-feeders, that their lands are not being enriched faster than the land used for dairying.

Much of the land about New-York city, has been sapped of its milk, and the owners are turning their attention to raising wool and fattening steers, and by so doing are renewing their lands.

W. M.

Du Page Co., Ill.

[For the Country Gentleman and Cultivator.]
LETTER FROM IOWA.

The Iowa State Ag. Society

Held its annual meeting at Desmoines, Jan. 14 and 15. Hon. GEO. G. WRIGHT of Van Buren Co., was elected President; Hon. Peter Melendy of Black Hawk Co., Vice-President; Dr. Shaffer of Fairfield, Jefferson Co., Secretary; Edwin Smith of Davenport, Scott Co., Treasurer.

The annual Fair is to be held at Dubuque, beginning Sept. 15. The last Fair was held at Dubuque, and proved quite successful, leaving a balance in the treasury of about \$700, after all debts and premiums are paid. Our State has always practiced holding the Fair two years in one place, and then changing to another part of the State. The Society have no law to this effect, only practice. I think it a good one, when the town or county in which it is held, will do the fair and honorable thing by the Society; otherwise one year at such a place is enough.

In the evening we had an interesting discussion on sheep, and on crops, &c. Sheep are very healthy and profitable here in our dry prairie land and climate. We were told by men of experience, that wool is raised in Iowa at a cost of 25 cents per pound, or less. The number of sheep is rapidly increasing in this State. They are now valued at \$3 to \$4, and many fine bloods higher.

Field Crops.—Mr. Lyman of Polk county, keeps *farm accounts*; his corn this year produced 75 bushels per acre, and cost him 10 cents per bushel. He lives five miles from Des Moines, where corn sells at 12½ to 15 cts. Twenty bushels of corn will raise and fatten a two hundred hog, and the market value of that pork is \$6 to \$6.50 at Des Moines. Winter wheat cost 35 cents per bushel—market value 60 cents. Spring wheat cost 50 cents—market value 50 cents. Let me here remark that winter wheat was a success last winter, owing to a good covering of snow. Spring wheat has proved more successful in this State, taking the average of seasons for several years past; yet in earlier times here we were successful with winter wheat. It may change for better again. Considerable winter wheat was sown last fall, which is yet alive, although the winter thus far has been very open and warm. Corn is more profitable than wheat, when fed to stock, and stock more profitable than grain.

The Iowa Agricultural College.

The fifth annual meeting of the Board of Trustees was held at Des Moines, Jan. 16, 17. We have no school or college building yet. We have a beautiful farm of 648 acres in Story Co., with the Chicago, Iowa and Nebraska railroad, now in running order, within 40 miles east of it, and in one or two years will probably pass the farm. We have donated for the purpose of putting up a college building, about 4,000 acres of land, and in county bonds and subscriptions, about \$11,000, and with \$10,000 of money from the State, we might put up a suitable building to open the college in.

The important business of this meeting of our trustees was to receive the report of Mr. Melendy, the commissioner, who has been out selecting the government lands donated last summer to the States, for the endowment of agricultural colleges. Iowa is fortunate above most of the States in having government lands to select from; and being foremost in the field our commissioner reported good selections, mostly in Fort Dodge and Sioux City, land districts in the northwest quarter of the State. Our report of these lands, about 200,000 acres, will be published in pamphlet form, probably ready for delivery in April, and emigrants, and any one seeking information of the country and government lands in Iowa, will please address our Secretary, Hon. Wm. D. Willson, at Des Moines. The report is a valuable and interesting one, containing description of the face of the country, growth of vegetation, timber, water, stone, coal, gypsum, animals, birds, &c. The quantity of government lands unsold in our

State at this time is about 6,000,000 acres. Let me here say that by the act of Congress donating these college lands to all the States, no State can select lands in another, but the assignees of the *land scrip*, which they will be entitled to in place of her quantity of lands, can select the government lands wherever they can find them.

Muscatine, Jan. 19.

SUEL POSTER.

A GOOD STEER.

MESSRS. TUCKER & SON—Mr. Henry Baker of this town, recently slaughtered a very remarkable animal of the bovine genus, which I think is entitled to a record in your valuable paper, for future reference. Mr. Baker is a very thorough and practical farmer, and has cheerfully furnished me with the following facts relative to his “big bull calf,” as he called him. Pedigree, high-grade Durham; age, twenty-one months and fifteen days:

Weight of one hind-quarter,	270	539 lbs.
other hind-quarter,	269	539 lbs.
one fore-quarter,	236	472 "
other fore-quarter,	236	472 "
Weight of hide,		135 "
Rough tallow,		106 "
		Total Dressed Weight,
		1,252 "
		Live Weight,
		1,720 "

Price of beef here, six dollars per hundred pounds. For rapid growth, and early maturity, the above statement beats anything I have seen recorded. Vermont may yet be as celebrated for cattle as she now is for horses and sheep. S. D. WALBRIDGE. North Bennington, Jan. 12.

Farmers should Keep Bees.

MESSRS. EDITORS—Farmers are not aware of the loss they sustain, from neglecting to avail themselves of the skill of the honey bee, to gather the sweets so profusely scattered around them. A trifling expense and little attention, more than compensated by the pleasure imparted, might secure to every farmer some hundred or hundreds of pounds of one of our most delicious sweets. The course to be pursued is a very simple and easy one. Not to follow the course of former times, and strive to secure the greatest number of swarms possible, until the bee pasture is so overstocked that hardly a swarm can accumulate more stores than is required for wintering, and killing off the light swarms, securing a mixture of honey, dry or mouldy comb, bee bread, and murdered bees. But let him procure or make a hive or hives, by the use of which he can secure the extra honey in neat boxes for preserving, unmixed with brood or bee bread; and in which they will store a portion of the fruits of their earliest labors. And of the character of the hives offered for public use, let him compare and judge for himself; duly estimating all the advantages secured, and difficulties to be encountered by each. Then let him take one, two, three or more hives to some friend, who for a fair price will put a good swarm in each, in good season; and he may have a hundred and fifty pounds of box-honey, early made the first season, and double that the second season, from three swarms, if the seasons are good honey seasons.

He must not listen to the superstitious notion that there is no luck with bees purchased by the owner; and he must wait until he accidentally finds a swarm, and hurriedly place it in some old salt box, so small that it will be obliged to swarm two or three times the first year, having four swarms with no honey; keeping on increasing his swarms, which actually afford him little more honey than could be gathered from so many humble-bees' nests. In the exercise of common discretion, care, and trifling expense, the farmer may add abundant sweets to his substantial healthful fare.

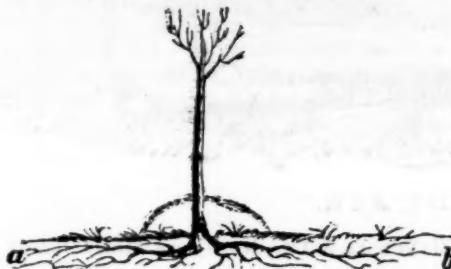
If this matter was duly appreciated, farmers would almost as soon think of doing without their herd of cows as their bees. And more profit may be made from three swarms of bees than from three cows, after deducting expense of purchase and labor bestowed upon each.

We would rather see every farmer's family richly supplied with this, and some to part with, to help him to a little ready change, than to see one apiarian with his hundreds of swarms, gathering the sweet stores from all the farms around. But if they will not do it, better that he should do it than that the sweets be lost.

J. H.

THE LENGTH OF TREE ROOTS.

We have had occasion before to speak of the great distance to which the roots of trees extend in the soil, and which is very imperfectly understood by most planters. It may be laid down as a general rule that the roots extend in each direction from the foot of the tree as far as its whole height, and in many instances much farther. We see proofs of this fact where such trees as the locust and silver poplar throw up suckers at great distances from the trunk. The nurseryman who passes between his rows of saleable trees is not often aware that the whole surface of the ground beneath his feet is covered with a network of roots, often extending the breadth of two or three rows. When he digs the trees by placing the spade a foot from the stem, he does not know that he cuts off and leaves nine-tenths of the fibres in the ground. The planter who sets them out supposes that for several years the roots only occupy a small circle, which he may spade and enrich, and thus afford them all the cultivation that is necessary. Usually, in such cases, the roots have gone far beyond the



outer bounds of his work. The annexed figure will show the condition of the case, *a* and *b* being the outside of the circle of roots in diameter twice the height of the tree. The importance of what is now termed broadcast cultivation, required for the benefit of all the roots, is becoming better understood. But the benefits of thin planting have been much less examined. There are instances, it is true, as on the western prairies, and other places exposed to the high winds, where the shelter of thickly planted trees is an important benefit while the trees are young; but in all other cases the injury from the crowding of the roots ultimately becomes a serious evil. It is too common an error to suppose that if the branches of trees have light and air enough, nothing further need be apprehended. But the facts already stated show that the tops may be far from meeting, and yet the roots may long since have become interlaced. Most would suppose that these remarks could not apply to dwarf pears, the roots of which are usually believed to be very short. We have, however, ascertained by examination that dwarfs do not form an exception, and that the roots of dwarf pears the second year from transplanting, and four or five feet high, have already made a circle of roots from seven to eight feet in diameter. Dwarf pear orchards, set eight feet apart, when well cultivated and pruned, have interfered even at the tops. More room for the roots should certainly be given. In a recent conversation with a very successful cultivator of grapes in vineyards, who has planted his vines twelve feet apart, he expressed a decided opinion in favor of greater distance, if the finest fruit and enduring and vigorous vines are an object.

In all cases, therefore, where land is not very high priced or limited, plenty of room for all fruit should be allowed; but where land is scarce, closer planting may be admitted, with a view of thinning out, or manuring and replanting, as the case may require, when the trees become old or stunted.

For windy localities perhaps the same course may be

pursued, but where a tall screen of trees can be provided, at a distance from the orchard so great that neither spade nor roots could affect it, the result would doubtless be better.

[For the Country Gentleman and Cultivator.]

FRUIT PLANTING IN WINTER.

LUTHER TUCKER & SON—We are having a remarkably mild and open spell of weather at this time. Some farmers are improving the opportunity to forward their spring work by plowing, ditching, and preparing the soil so as to be ready for planting without much delay at the proper time. Others are removing and setting out fruit and ornamental trees, while the sap is dormant and the earth is mellow and moist to receive the roots, which will become settled and bedded, ready for an early start in the spring.

We planted, last week, several acres of apple trees, forty feet apart; then a row each way between them with the Kentish or Early Richmond Cherry, at twenty feet apart; then a row of early blackberries along each row, and between them, at ten feet apart, with the intention of putting strawberries along each row of blackberries, and between them, at five feet apart. As the greatest draught upon the moisture and nourishment in the ground is at the time the fruit is ripening, several varieties perfecting their fruit at different periods, yet following in regular succession, may be mingled together on the same ground more profitably than to appropriate a separate piece of land to each. Strawberries are the earliest to ripen their fruit, cherries follow soon after, yet precede the blackberries, which, in their turn, give way in time for the apples to have the full benefit of the rains at the time of ripening their fruit.

WILLIAM PARRY.

Cinnaminson, N. J. 1st mo. 26th, 1863.

Washing Machines and Wringers.

Please state (or ask others to) what washing machine and clothes wringer you (or they) think best for family use—the cost of each or either, and the makers. A large number of the best washing machines could be sold in Baltimore or Washington City if kept on sale there.

Croom, Md.

A SUBSCRIBER.

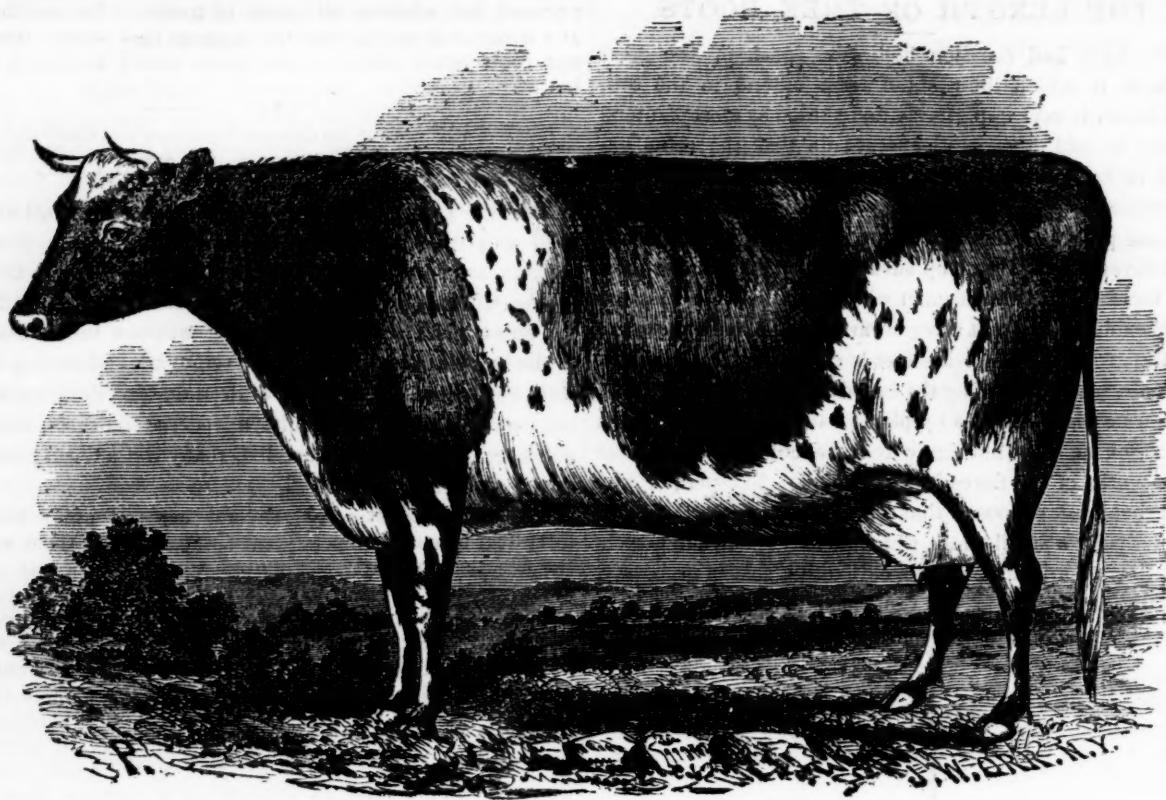
The are several good washing machines. Where the house-keeper can superintend her own work we like the Union washing machine best. For an unskillful washerwoman, who will take no care, the Metropolitan is simplest and best, being an improved pounding barrel. The Nonpareil, and some other machines, have also a good reputation. The Universal clothes-wringer, which is furnished with cog-wheels or gearing, appears to be best and most efficient, leaving the clothes much drier than those machines which have no gearing. The prices of the washing machines are not far from \$10 each, and the wringer a little less. We cannot give the manufacturers' address, but our correspondent will find most of them in back volumes of this journal, in the advertising columns.

THE JERSEY HOG SCALDER.

Are you acquainted with the Jersey hog scalding? It has been prominently used in Monmouth and Burlington counties for more than twenty years, and now all over the State, but not (as far as I know) in a single instance west of the Delaware. I think that is its proper name. They save considerable of both fuel and labor. I helped use one a day or two since which was about twenty years old, and worked as good as new. It was hired enough the first two winters, at 50 cents per day, to pay for itself, and I suppose has been used by nearly twenty persons each winter since.

The trough is made of two inch plank, well clamped with iron, and the fire is placed in a copper pipe, which goes through or around the bottom. If you have not seen it, and would like a more particular description, I will try to write one.

G. H.



AYRSHIRE COW LADY AYR."

Imported by Hungerford & Brodie, and the property of BRODIE, CAMPBELL & Co., New-York Mills, Oneida Co., N. Y. Lady Ayr was calved in May, 1853. Her dam is from the prize cow at Girvan in 1839, and her gr. g. g. grand dam is placed in the condensed sheet of Pedigree for the year 1799. Sire was bred by Mr. Reed; he was out of Mr. Thomas McCreath's cow—grand sire was bred by Mr. Mickle; he won the first prize at Tarbolton and at the Lismore Cattle Show in Ireland, and was sold to the Duke of Devonshire. Gr. g. sire "Jock the Laird." Lady Ayr won the first prize at Ayr in the spring of 1854; also the first prize at the New-York State Fair the same year; also the first prize at the New-York State Fair in 1855, and the same year she won the first prize at the National Show at Boston, as a two year old; also won the first prize at the New-York State Fair in 1858, as an aged cow; also one of the herd that won the first prize at the National Show at Chicago in 1859; also one of the herd that won the first prize at St. Louis the same year; also one of the herd that won the first prize at the National Show at Cincinnati in 1860.

The Best Time to Feed Grain to Sheep.

Many farmers contend that there is really no advantage in feeding at one time more than another. But those who have been accustomed to feed sheep grain, and who have observed their movements, will agree with me, that morning is *not* as good as noon or evening, for feeding grain.

There are several good and philosophical reasons in favor of feeding grain, roots, or apples, to sheep, at the noon, rather than in the morning or at evening. We will state a few of them.

1st. If grain be fed in the morning, before the sheep have taken their feeding of hay or cornstalks, there is such a rush of the stronger ones, that the weaker sheep do not usually get their proportion, while those that do not need as much as some others, swallow, unmasticated, more than their allowance. But, by feeding the grain about noon, the sheep get their appetites partially satisfied, and the weaker ones become more inclined to stand up for their rights at the trough, whereas, in the morning, they are often not much inclined to move.

2d. Another reason why noon is better than morning for feeding grain or roots, is, sheep need to be fed often, and but little at a time. Every good shepherd will agree with me in this. If their hay or cornstalks be fed in the morning, without grain, they will be more likely to eat it all clean; whereas, if they get a feeding of grain or of

roots, their appetites are partially satisfied, and they will select the most choice portions of their fodder, and leave the coarsest parts, which will never be eaten. But, by requiring them to eat their coarser fodder first, and the dainties afterwards, fodder will be consumed more economically than if the grain were fed first.

3d. Another plausible reason for feeding grain at noon is, the grain will be mingled more thoroughly in the stomachs of the animals, with the coarse fodder which they have eaten; and therefore when their cuds rise, every portion of their food becomes more thoroughly masticated; consequently more nutriment will be extracted from a given amount of food.

On the contrary, if grain be fed when their stomachs are nearly empty, it will be more liable to remain in one mass at one side of the stomach, than it otherwise would were it eaten after the stomach had been partly filled with hay, straw or cornstalks.

When we feed unground Indian corn to neat cattle, for example, many of the kernels will settle to the lower side of the stomachs, and will never rise with the cuds, and consequently, will pass through the animals undigested. And I have never been able to perceive why this theory will not hold equally good with sheep as with other ruminating animals. I believe, however, that it is universally admitted that no grain will pass through sheep undigested. But, notwithstanding this admitted fact, it cannot be denied, that it will be better to have the grain mingled with other food, than to feed it separately.

S. EDWARDS TODD.



[For the Country Gentleman and Cultivator.]

SERAI TAVOK FOWLS.

The fowls which our cut illustrates were first imported into England about eight years ago; they are said to partake of the character of the Polish fowls in their chief characteristics, in compactness of form and good laying qualities. They were first imported by Miss E. Watts, formerly editress of the *Poultry Chronicle*, from Constantinople, in 1854. We will let her tell her own story: "They arrived in January, in a steamer chiefly manned by Turks. The voyage had been long and rough, and the poor fowls so rolled over and glued into one mass with filth were never seen. Months afterwards, with the aid of one of the first fanciers in the country, we spent an hour in trying to ascertain whether the feathers of the cock were white or striped, and almost concluded that the last was the true state of the case, although they had been described by our friends as *bellissimi galli bianchi*.

"I at once saw enough to make me unwilling to be entirely dependant for the breed on the one sad looking gentleman, with his tuft heavy with dirt, dirt for a mantle, and his long clogged tail hanging round on one side. I wrote directly for another importation, especially for a cock, and to ask for the name they had at home. In answer to the first request, I found that good fowls of the kind are difficult to get there; our friends have ever since been trying to get us two or three more, but cannot succeed, either in Constantinople or other parts of Turkey. With regard to the name, he told us they were called Serai Tavok. Serai, as is well known by every reader of eastern lore, is the name of the Sultan's palace. Tavok is Turkish for fowls; the simplest translation of this is *Sultan's fowls*, or *fowls of the Sultan*, a name which has the double advantage of being the nearest to be found to that by which they have been known in their own country from which they come.

"Time very soon restored the fowls to perfect health and partial cleanliness; but it was not until after the moulting season that they showed themselves as the *bellissimi galli bianchi* described by our Constantinople friend."

They are said to nearly resemble the white Polands, but with more abundant furnishing, and shorter legs, which are "vulture-hocked and feathered to the toes."

"In general habits," says Miss Watts, "they are brisk and happy tempered; but not kept in as the Cochin Chinas." They are reputed very good layers; their eggs are said to be large and white; they, like all the tribes of top-knot fowls are non-setters and small eaters. They are in size about that of the smallest of the so-called Polands. Their plumage is white and flowing; they have a full-sized, compact tuft on the head; are muffed, have a good flowing tail, short, well-

feathered legs, and five toes upon each foot. The comb is merely two little points, and the wattles very small. Miss Watts says, "I have never seen fowls more fully decorated—full tail, abundant furnishing, in hackles almost touching the ground, boots, vulture hocks, beards, whiskers, and full round crests." As yet we are not aware of any of these fowls having reached this country.

Bennington Center, Jan., 1863.

C. N. BEMENT.

[For the Country Gentleman and Cultivator.]
Feed of Cows—Apples—Winter Cream.

MESSRS. EDITORS—Mr. Wm. J. Pettee of Conn., gave a valuable article on this subject lately, (Co. GENT., Jan. 15. '63,) suggesting some further thoughts, which I take the liberty to write out for your journal. He endorses the statement of a previous writer, that "good bright corn-fodder and carrots" leave little to be desired in the way of cow feed, and adds that the milk of cows so fed is richer and of better quality than that obtained from those fed on other substances. I have never had much experience in feeding out carrots, but have got, and still succeed in getting, good rich milk from cows fed on corn-fodder and apples, a peck per day, with a salted mess of bran and kitchen slops in their place once or twice a week, to supply the need of saline, and to give variety to their food. Corn-fodder I think the best feed for cows in milk with which they can be supplied, though early cut clover hay is nearly as good, and better, perhaps, if it is desired to fatten them.

The value of apples for milk cows is not fully appreciated by farmers, or there would be less selling of this fruit for cider making at five or six cents per bushel at the mills. I think them worth ten cents, at least, for cows, pigs and other farm stock, and have fed a good many hundred bushels since I began farming.

Every one who has skimmed milk a single season knows that as the amount of milk given by cows in autumn decreases, the thickness of the cream over a pan of milk increases, and with good keeping for the cows, cream nearly half an inch thick often rises over two inches of milk, kept at a proper temperature. The cream is of a thicker consistency also, as those who wield the churn dash soon find out, but with proper management there is no particular need for protracted churning. A certain temperature must be obtained, and the rest is mechanical manipulation—the breaking of the film of casein which holds the globule of butter. The milk is sometimes so rich that in very cold weather the striking of the stream of milk in the pail will produce a few grains of butter—a fact setting aside the notion that cream must always be soured before butter can be produced from it.

The method of fattening cows while in milk is worthy of more general practice. It will pay better than any other mode of disposing of old cows with which we are acquainted, particularly if they are to be sold. To dry off and fatten an old cow in the fall brings the beef into market at its lowest point of price as a usual thing, while by keeping them in milk through the winter, a high price is generally obtained for the butter, and beef is higher in the spring than at any other season. We have fattened cows in the fall for supplying our own beef barrel, but have never thought we could afford to do it for supplying others.

J. H. B.

GOOD PIG.—As you have published some "Pig Accounts," I send you one for publication. My neighbor, James Cummings, killed a pig last week, 9 months old, which dressed 255 lbs., which will do pretty well for a beginning. He has just commenced farming on his "own hook," and is a subscriber for THE CULTIVATOR. I intend to try my luck at raising pigs next summer.

Calhoun Co., Mich.

T. W. B.

MAKING MANURE.

MESSRS. EDITORS—I wish, as soon as you can, that you give in "THE CULTIVATOR," an extended and particular description of the best plan, and the cheapest or least troublesome, in your estimation, for increasing and saving manure. I have no muck, marsh, or anything of the kind on my place, but have straw in considerable quantities. C. S. LEBARON. *Saline, Mich.*

We suppose all that our correspondent desires, is the best way to manufacture manure or compost in the absence of muck or peat, so as to make the most of his animal matter. We take it for granted that he keeps animals, for without animal matter of some kind, manure cannot be made. The question is, how to make the most of it. The great point is to save by absorbents, all the liquid and soluble portions which would otherwise escape. These absorbents are to be applied daily to the yards and stables, as well as to the manure at a subsequent period. Nothing is more convenient for the yards and stables, than straw, and if used freely enough to prevent the escape of all liquid manure, a great deal may be worked up in a single winter. On the arrival of spring, different courses must be pursued, according to circumstances. Strawy manure will generally require a summer's rotting, to be fine enough to spread profitably; for if spread in lumps or flakes, and not finely intermixed, it will be of comparatively little use the same year. Let it therefore be thrown up into square piles early in spring, and if consisting very largely of straw, it should remain exposed to the rains and weather. The centre will decay thoroughly; the outside should then be trimmed off with the hay-knife, and thrown on the top. By autumn it will be in fine condition for top-dressing grass lands or prepared wheat grounds.

When the straw is not sufficient to retain all the manure, turf or loam is about as good as muck, for intermixing to make compost. It should, of course, be quite free from stone. To save the labor of carting the loam into the barnyard and out again, draw the manure out into or near the field where it is to be spread, and make the heaps there. If the soil is heavy, one-third or even one-quarter of loam will be enough; if lighter, more will be needed. Make the alternating layers of manure and soil as thin as practicable, to save the labor of intermixing afterwards. Heaps thus made of the coarsest manure in the spring, will be fine for spreading by autumn. Manure already fine in spring, may be applied to corn or other spring crops; but it must be broken fine with the harrow and well harrowed into the soil, before being turned in with a shallow plowing.

Manure made where litter is scarce, should be well sheltered before made into the compost heaps already described, or much of it will be washed away by rains.

Coarse or fibrous manure may be advantageously spread upon land in autumn or winter, to plow in for spring crops. If however, spread on meadow land, the coarse or strawy parts, left on the surface, after the manure is washed away from them, should be raked off with a spring-toothed horse-rake.

FERMENTING BONES.

The Irish Farmer's Gazette gives the following inquiry and answer on this subject :

A correspondent asks—If I put half a ton of bones, broken in 2 inch pieces, in the corner of a shed, heap clay, tan or turf mould on it, and form a hole in the top for pouring boiling water, will the bones dissolve, and how long will it take? Will the smell be very offensive, and will it induce dogs to tear them about? What weight of

superphosphate will it make when dried out?"—The bones will ferment in the way proposed, but they will do better if mixed with the water, and ferment more equally if wet with it before covering with the clay than after. According to the state of the weather, &c., it may take from a fortnight to three weeks or a month to decompose them. The covering of earth will keep down the smell, but you must keep any cracks that may appear in the covering closed. If dogs have access to the heap, there will be some danger of their pulling the heap about. A ton of bones may make in this way $1\frac{1}{4}$ tons, or something more.

CULTURE OF TOBACCO.

MESSRS. EDITORS—I have been looking over some of the essays in your valuable paper, in regard to the cultivation of tobacco, and although they explain much, yet they leave out a great deal that a new hand would wish to know. Having raised but two small crops, and there being no one near of whom to make satisfactory inquiries, I wish to ask some of the old hands at raising, the cause and preventive of "fat stem," and also when the plant is ripe, so that it will make the best wrappers, for I find the longer it stays in the field, the thicker the leaves become. How long after topping?

I see in Connecticut they use twine to hang with, which is much more expensive than our manner. We use lath, not requiring half as many nails, and costing not half as much as the twine for once hanging, and will last for years, besides being more convenient to handle. Our laths are rived out of oak or hickory, and shaved with drawing knife to the proper size, 4 feet long, $1\frac{1}{2}$ inches wide and half inch thick, one end sharpened to slip on a steel spear-head made like an Indian arrow head, about 5 or 6 inches long, and sharpened at the point for about an inch on each side; the other end of the stick is inserted into a hole morticed in a post conveniently, about breast high. Six or eight plants, according to size, are put on a stick, the stick running through the stock about three or four inches from the but. You can hang faster, the stock cures out faster, being split, and the smallest plant as well as the largest will go on the same stick, and the tobacco never falls, as it sometimes does with twine. Try it, brother farmers, and you will never use string again. E. M. S. *Twenty Mile Stand, O.*

WORN OUT LAND.

P. Hathaway, of Milan, O., writing to the *Rural New-Yorker*, on this subject, asks for facts bearing on the question, as to whether land can be really worn out or not. He says:

"Many years ago an observant and intelligent farmer was speaking to me about worn out land. I requested him to give me an example. After some thought he instanced a field of hard clay, naturally thin, which had been carelessly cultivated for years, and then lay in natural grass. Its vegetation was very scanty. Some rolling spots were bare, and it presented, especially in times of summer drouth, a very sterile appearance. Afterward that field changed owners. Its new manager was a thorough and energetic farmer, and it is now luxuriant in its vegetation, even to lodging and rankness."

Another farm is mentioned, one of the worn out plantations of Virginia. It contained 500 acres, and after running its owner hopelessly in debt, was sold at \$1 per acre. Its new owner treated it with plaster and clover, and a small starting application of guano. In a few years it gave him twenty bushels of wheat per acre. "That this land was really worn out, as far as its first owner was concerned, I have no doubt," says Mr. H., "but considering how easily it was recuperated, was not the exhaustion more apparent than real?" The soil cannot be so easily worn out.

[For the Country Gentleman and Cultivator.]

What Can be Done with the Water-Ram.

EDS. COUNTRY GENTLEMAN—I cannot help thinking that a description of the arrangement for supplying my premises with water will be interesting to some of your readers, and will state them as briefly as I can. A No. 5 Douglas' Hydraulic Ram—which from its size requires a considerable flow of water to operate it—forces the water from a spring situated in a meadow below and in front of my house at a distance of 800 or 1000 feet, up to the 3d story of the dwelling, requiring altogether an elevation from the ram of some 65 feet.

The reservoir into which the water is discharged, contains about 400 gallons, and is placed immediately below the floor of the 3d story, and supplies a bath tub and water closet in the 2d story, the kitchen below, and a summer kitchen and wash house, detached from the main dwelling about 50 feet. But the flow into this reservoir is so abundant and continuous, that an escape pipe is required to carry off and turn to account the overplus water, which is received by underground pipes, in a larger reservoir placed out of doors in a grove of forest trees and back of the dwelling. This reservoir is like a brewer's tank, and holds perhaps 2,500 gallons—is about 30 inches deep—is circular, and being banked up and sodded, presents a pleasing appearance filled with water clear as chrysal. From this a pipe supplies a water trough at the barn yard, as it is required for the cattle and horses.

In summer a gaily striped tent is stretched over this large tank, which, in addition to an inviting and picturesque effect, affords the youngsters especially a source of unceasing comfort and pleasure as a swimming place and bath. This tank supplies a grape-house also, which is no small consideration in the saving of labor, as by simply turning a cock a supply is drawn into a large tub and readily distributed to the plants.

But I must by no means omit to mention that this grand out-door tank is still farther obliged to contribute its aid in supplying the ice house, which is situated but a few feet from it, in the grove back of the house. This is effected by a very simple process. The tank is tapped at the bottom by a small lead pipe passing under ground, and entering the ice house close by the side of the door. By turning the cock during freezing weather and especially through the nights, a fine spray is jetted from the end of the pipe, which is closed and punctured with fine holes. The spray is thrown nearly to the top of the ice house, and falling in all directions upon the ice—for we by no means rely upon this for our supply of ice—it fills effectually all the interstices, and consolidates the mass so completely as to render it almost insoluble, which is of infinite comfort during summer; and as to economy of labor and space cannot be surpassed.

Now every one knows that a large household supplies a correspondingly great amount of debris and off-scouring, and of course there must be provision for the safe conduct of all this from the dwelling.

To effect this object perfectly, the drainage from bath-house, kitchen, wash house and water closet, passes off through 4 inch vitrified pipes, laid in cement, under ground, at such an inclination downward as to sweep into the discharge, which is simply an excavation in the earth at a corner of the vegetable garden. By this means every drop of dish-water, suds and refuse from closets, bath house and chambers, is turned into the best and most easily applied compost manure, far removed from all proximity of the senses, and goes far, if not entirely, to remunerate for the outlay, and I think the whole arrangement must satisfy the most exacting and fastidious as to economy, nicety and comfort to all concerned.

For all these comforts I am indebted, first, to Providence, for the glorious spring in front of my house; second, to the Messrs. Douglas for a first rate ram, and lastly to the skill of an unpretending country mechanic—a farmer and plumber combined. Although the quantity

of lead pipe was considerable, owing to the distance of the ram from the dwelling and the various places to be supplied, the expense was not nearly so great as one would imagine, and especially while witnessing the result. Experience teaches us that a very great saving of expense can be effected by personal supervision, pre-arrangement and contract, and a degree of comfort and economy of labor is thus often secured which would require a greatly disproportioned amount of money to be thought an equivalent.

You have no doubt many subscribers who could turn equal advantages to equally good effect, if they only knew how, and if my experience will incite them to the effort I shall not regret having given it.

J. B. OKIE.

Edgewood, Del. Co., Pa., Jan. 12, 1863.

[For the Country Gentleman and Cultivator.]

Recipe for Brown Bread.

Scald two quarts, corn-meal, with new or skim milk or water, a small teacup molasses and a tablespoonful salt. When cold, stir in one quart unbolted rye or rye middlings. Bake in an iron kettle in a slow oven, three or four hours.

As the premium recipe you published from the Agriculturist, has proved a failure with all who have tried it in this vicinity, I send you the above, which makes as good brown bread as I have ever seen. The proportions are the same as published at the Patent Office for the "Boston Brown Bread," but the process less complicated, and bread quite as good. "No PREMIUM." Durham, Conn.

[For the Country Gentleman and Cultivator.]

PREPARED FOOD FOR INFANTS.

MESSRS. L. TUCKER & SON—About eight years ago I received from the estimable lady of the Rev. Dr. Palmer, the following receipt. We have tried it thoroughly, and have raised four fine healthy boys by its means. Believing it to be just the thing for infants who are deprived of their mother's breasts, I send it to you, feeling that in so doing I am partially paying the debt which my wife and myself owe to Mrs. Doct. Palmer, and also convinced that by publishing it you will confer a favor on hundreds of your subscribers.

HUMANITY.

RECIPE.

Gelatine, 5 grains.

Arrow Root, 25 grains.

Water, one and a half pints.

These quantities are always to be used. The milk and cream are to be increased by the age of the child.

For the first three months—Milk, 2 gills—cream, 1 gill.
From three to six months—Milk, 3 gills—cream, 1 gill.
From six to nine months—Milk, 1 pint—cream, 1½ gills.
From nine to twelve months—Milk, 1½ pints—cream, 2 gills.

If the child should be feeble, make the water one quart.

Directions for Preparing it.—Put one and a half pints of water in a sauce-pan over the fire, and dissolve the gelatine in it. When the water boils pour in the arrowroot, previously mixing with a gill of cold water. Let this boil five minutes, then add the milk; when that boils pour in the cream and remove it immediately from the fire. Sweeten it with loaf sugar, a little sweeter than cow's milk. The milk should come from *one good cow*, and the cream should not be more than three or four hours old. If the child is constipated use more cream; if otherwise, less should be used.

Two quarts of milk will furnish the cream necessary, and yet be good for family use.

Be careful to measure out the required amount of milk while it is new, and set it by itself. In cold weather, if you take milk of the milk-man, make it blood warm before setting it away, else it will be difficult to get the cream in the specified time. Albany, Jan. 30, 1863.

NEW-YORK STATE AG. SOCIETY.

Winter Meeting.

The Annual Meeting of the New-York State Agricultural Society took place at the Assembly Chamber, in this city, Feb. 11th, in pursuance of notice. The chair was taken by the President, Hon. EZRA CORNELL, at 12 o'clock. The Report of the Treasurer, LUTHER H. TUCKER, was then read as follows:

RECEIPTS.	
Cash on hand per last account.....	\$142.69
Memberships at Annual Meeting.....	37.00
Life Memberships, during the year.....	250.00
Annual Membership, during the year.....	1.00
Donation from Hon. Zadock Pratt.....	50.00
Volumes Transactions sold.....	18.00
Avails of Note discounted May 10.....	738.58
do. do. do. May 24.....	730.30
State Appropriation, Dr. Fitch, State Entomologist.....	1,000.00
do. do. for State Agricultural Society.....	840.00
do. do. Flax Machinery Premiums.....	2,000.00
Receipts at Rochester Fair:	
Entries, tickets sold, &c.....	\$10,817.45
Rent of grounds.....	375.00
Life Memberships.....	79.00
	11,271.45
Hon. E. Cornell, services Arabian Horse, 1863.....	100.00
	\$17,169.02
DISBURSEMENTS.	
For Premiums at Winter Meeting.....	\$219.73
For Premiums, &c., due on account of previous years,	534.68
Library and Museum expenses.....	82.75
Salary of Dr. Fitch, State Entomologist.....	1,000.00
Salaries and travelling expenses.....	2,823.88
Incidental expenses.....	101.17
Postage account.....	126.95
Loan account.....	1,500.00
Printing and Stationary.....	386.13
Premiums and premium expenses Rochester Fair,	4,486.77
Expenses Rochester Fair.....	2,092.90
	\$13,354.96
Cash on hand, including the still unexpended State Appropriation of \$2,000 for Premiums on Flax Machinery,	3,814.06
	\$17,169.02

The Report of the Executive Committee followed, from the Secretary, Col. JOHNSON, reviewing the operations of the Society, and the progress of our agriculture during the closing year. Increased attention to MACHINERY has been a marked feature during the past year, and has been of important assistance in enabling us to till our farms while so many have been withdrawn from them for the defence of their country. The WOOL CROP of the State has attracted increased attention under the stimulus of the lack of cotton and the requirements of the public service. This was illustrated in the exhibition of Sheep at the Rochester Fair, which was superior to that of any previous year. Caution, however, is required, to prevent the occurrence of undue excitement in a speculative way, leading hereafter to a reaction of such disastrous consequences, as the country has once before experienced. FLAX CULTURE has also become a matter of great importance, and the efforts to secure new mechanical means of rendering the fiber available for the requirements of the manufacturer, have been the subject of scrutiny on the part of the Committee, under an appropriation made by the last Legislature. The reports on this subject, prepared after careful and thorough examination by Messrs. Samuel Campbell, J. Stanton Gould, and A. Wild, show that the desired end, although as yet unattained, is not to be regarded as impracticable, and that its value to the Farmers of the State will be very great. An Agricultural Survey of Orange County has been prepared for the coming volume of the Transactions by Hon. G. DENNISTON, formerly of that county and now of Steuben. Dr. ASA FITCH is engaged in summing up the results of his investigations into the Injurious Insects of the State. The success of the county and town agricultural associations for the year has generally been good, and in many cases exceeded the anticipations entertained. A large increase is probable in the DAIRY business of the State. Cheese fac-

tories are springing up, and the foreign demand is rapidly enlarging. But we need a more definite and systematic plan of operations, to ensure the continued fertility of our soils, and greater and more certain pecuniary returns; and while engaging in particular investments, it should be done in such a way as not to jeopardize the other interests, and diminish the real capital, of the farm. The FRUIT crop of the State is also becoming one of greater extent. The culture of SORGHUM has been successful at the West, but experiments in this State have not resulted in such a way as to encourage effort in this direction. The AGRICULTURAL STATISTICS of the State for 1862, will probably be obtained this winter. The FAIR at Rochester is reviewed at length. Obituary notices of friends of agriculture are given. The New-York State Agricultural College will be ready to resume operations as soon as more favorable times arrive, and the lands donated for the encouragement of Education in Agriculture and the Mechanic Arts by the last Congress, should be accepted by the State as a trust for the benefit of this institution.

After the acceptance and adoption of the Reports as submitted respectively by the Treasurer and Secretary, Mr. John A. Corey moved the appointment of a committee of three from each Judicial District to nominate officers for the ensuing year, and to recommend a place for the holding of the next Fair. This was agreed to, and the following committee appointed:

First District—Edward G. Faile, Thos. H. Faile, Solon Robinson.
2d.—Lieut. Gov. David R. Floyd Jones, Wm. Kelly, A. B. Conger.
3d.—Herman Wendell, J. C. Osgood, John S. Gould.
4th.—John A. Corey, Oscar Granger, D. P. Forrest.
5th.—T. S. Paxton, George Geddes, Norman Gowdy.
6th.—A. B. Cornell, C. I. Hayes, F. B. Smith.
7th.—D. D. Moore, H. E. Smith, C. F. Abbott.
8th.—T. C. Peters, L. A. Green, A. Dow.

The committee retired, and after deliberation presented the following nominations, which were accepted, and the gentlemen named duly elected:

PRESIDENT.
EDWARD G. FAILE of Westchester.

VICE-PRESIDENTS.
1. James Boorman Johnson of New-York.
2. Samuel Thorne, Washington Hollow, Dutchess County.
3. Herman Wendell, Albany.
4. Chauncey Boughton, Waterford, Saratoga county.
5. Eli Merriam, Leyden, Lewis county.
6. Clark I. Hayes, Unadilla, Otsego county.
7. B. M. Baker, Rochester.
8. T. C. Peters, Darien, Genesee county.

COR. SECRETARY.
Benjamin P. Johnson, Albany.

REC. SECRETARY.
Erastus Corning, Jr., Albany.

TREASURER.
Luther H. Tucker, Albany.

EXECUTIVE COMMITTEE.
James O. Sheldon, Geneva; Samuel Campbell, New-York Mills; D. D. T. Moore, Rochester; Joseph McGraw, Jr., Dryden; Oscar Granger, Saratoga Spa.

The Society then adjourned until evening.

Evening Session.

On convening in the evening, Dr. ASA FITCH, Entomologist of the Society was introduced by the President, and read a paper embodying the results of his investigations during the past year, principally into the character and habits of the Insect which has of late proved so destructive in the Asparagus beds of Long Island. This was listened to with close attention.

Hon. HENRY S. RANDALL of Cortland Village was then presented. His flock of Sheep having been attacked, the last of December, by a mad dog, and several of them bitten, Mr. R. had availed himself of the opportunity thus afforded to watch very carefully the symptoms and progress of Rabies in Sheep, and proceeded to give a fuller narrative of its various manifestations from day to day, beginning with its first inception and only concluding with the death of the patient, than has ever before been committed to paper by an American observer. It was our intention to have given in this number the general conclusions attained, but we are forced to defer them until hereafter. There are some discrepancies noted by Mr. Randall, between the cases he so thoroughly examined, and the descriptions of the disease heretofore given by Youatt and other foreign writers; and the paper was an

interesting and valuable one, not only for this reason, but from the constant and minute examination involved and the detailed notes which were taken.

Mr. JOHN STANTON GOULD of Hudson, then read the Report of the Committee consisting of SAMUEL CAMPBELL, Esq., of New-York Mills, A. WILD of Cohoes, and himself, who had visited Penn Yan and Lockport to examine the processes now going forward at those two places to produce Flax Cotton. The Report presents a full statement of the ends which it is desired to attain, and the measure of success heretofore accomplished. The action of the Executive Committee on the Report, is published below; their decision was only reached after a protracted discussion of all the different bearings of the subject, and was finally agreed to unanimously as the only one to which the Society, could come in justice to themselves and to the trust reposed in them by the Legislature of the State. It was matter of no little regret that the self-denying and public-spirited labors carried on during the past year by Mr. BEACH of Penn Yan, and by the Flax Company at Lockport, should not have arrived as yet at practical results justifying the award to their projectors, of the fund appropriated by the State to test the important experiment in which they are engaged.

Mr. President CORNELL then proceeded to read a paper on the results of his observations during the past season, in travelling among the farmers and breeders of Great Britain—a paper containing many useful suggestions, to which we may refer hereafter when it shall appear in print. Col. JOHNSON followed in an extemporaneous account of the American Department at the Great Exhibition at London, the reception our contributions met from the Commissioners and the public, and the successes they obtained. Col. JOHNSON's remarks met with frequent applause; and, in the course of them, he called attention to extracts from the reports of the London Times, descriptive of our Implements and Machinery exhibited. As soon as the awards of the Juries were published, and the public became aware that the proportion of prizes and honorable mentions received by American contributors was greater than that obtained by the representatives of any other country, the location occupied by our inventors was thronged with a constant crowd, and the London papers devoted considerable space to that part of the Exhibition. We have not room at present to quote, as we should like, the extracts read by Col. JOHNSON, and which will be embodied in his Report submitted to the President of the United States, as the Commissioner and official representative of this country.

The proceedings of the day and evening here terminated, after pleasant and profitable sessions, at which many of the oldest friends and former officers of the Society were present.

Second Day's Proceedings.

The Exhibition at the Agricultural Rooms included the customary show of Fruit, among which was an extraordinarily fine collection of Winter Pears from Ellwanger & Barry of Rochester, and a good show of Apples from Messrs. Slingerland, Sheldon, Price, Cary, Hall, and others, and a very limited exhibition of Grain, Seeds, and Dairy Products. There were a number of Implements also on view, notices of which will be found in the Report of the Committee given below.

A session for discussion, &c., was also held during the day in the Society's Lecture Room, Hon. A. B. CONGER of Rockland, in the chair. The attendance was not large, and we have not room at present to refer to the proceedings particularly. A paper was read on the Wines and Vineyards of Europe, by Dr. HALL of Yonkers, who had devoted the season of the last vintage mainly to their examination.

Thursday Evening.

The Society met at the Lecture Room in the State Agricultural Hall, shortly after 7 o'clock, President Cor-

NELL in the chair. His Excellency Gov. SEYMOUR being present, was invited to a seat on the platform.

The Secretary, Col. JOHNSON, then read the Reports of Committees on articles competing at the Exhibition—showing the following

PREMIUMS AWARDED—FRUITS.

Best collection of Winter Pears, Ellwanger & Barry, Rochester.	Dip. & S. M.
Best variety of Winter Pears. (Easter Beurre.) H. G. Warner, Rochester,.....	S. S. Med.
Best 20 varieties, W. H. Slingerland, Bethlehem,	\$4
2d best 20 varieties, H. Pine, Pittstown,	2
Best 15 varieties, George Cary, Bethlehem,	3
Best dish of Apples. (Newtown Pippin.) Geo. Cary,.....	S. S. Med.
2d best do., (Esopus Spitzenberg.) J. O. Sheldon, Geneva,....	Trans.

GRAIN AND SEEDS.

1st premium Winter Wheat, E. S. Hayward, Brighton, (Sonie's Wheat,.....	\$3
2d. H. Pine, (Red Wheat,.....	2
1st premium Spring Wheat, H. Pine,.....	2
1st premium Rye, H. Pine,.....	1
2d. A. E. Van Allen, Defreestville,.....	1
3d. H. Schoonmaker, Cedar Hill,.....	1
1st premium Barley, E. S. Hayward,.....	1
2d. H. Wier, Johnsonville,.....	1
1st premium Oats, H. Wier,.....	1
1st premium Yellow Corn, E. S. Hayward,.....	1
2d. H. Schoonmaker,.....	1
3d. H. Pine, Lansingburg,.....	1
1st premium White Corn, H. Wier,.....	1
2d. A. E. Van Allen,.....	1
3d. H. Wier,.....	1
1st premium Peas, H. Wier,.....	1
1st premium Beans, H. Pine,.....	1
2d. S. L. French, Warren,.....	1
2d. A. E. Van Allen,.....	1
1st premium Flax Seed, H. Wier,.....	1
1st premium Buckwheat, H. Schoonmaker,.....	1
2d. H. Wier,.....	2

A very fine specimen of ear Corn was exhibited by George Benedict of Verona, Oneida Co.

Twenty varieties of Corn in the ear were shown by D. A. Bulkeley of Williamstown, Mass.

The Committee recommended an honorable mention for a sample of California Peach Blow Potatoes exhibited by H. Schoonmaker, Cedar Hill, Albany Co.

D. A. Bulkeley, Williamstown, Mass., had on exhibition samples of his very excellent Seedling Potatoes, the Prince Alberts and Monitors.

Henry Wier, Johnsonville, Rensselaer Co., exhibited a very fine sample of Millet seed. There being no premium offered, the Committee recommended honorable mention.

BUTTER.

3 tubs Butter, made in June, August and November, H. Pine,.....	\$10
2d premium,.....	5
1st premium Winter Butter, S. L. French, Warren,.....	3
2d. Mrs. H. Wier, Johnsonville,.....	3

CHEESE.

1st premium, E. F. Carter, Evans' Mills,.....	\$15
to the act of Congress appropriating Public Lands in the interest of Agricultural Education :—	

RESOLVED—That the New-York State Agricultural Society are in favor of the passage of a law by the Legislature of this State accepting the grant of lands made by Congress "in aid of Instruction in Agriculture and the Mechanic Arts," and that the Legislature be respectfully requested to accept said grant, by the passage of a law to that effect.

An invitation having been received from the International Agricultural Exhibition to be held in Hamburg, July 1863, that our Society should be represented at the exhibition, and the invitation having been accepted, it was

RESOLVED—That the Hon. EZRA CORNELL, President of the Society, be appointed a delegate to represent the Society at said Exhibition.

Mr. CORNELL then proceeded to address the Society, having now reached the close of his term of office. His remarks were practical and will be read with interest by the farmers of the State. At its close he introduced the President elect, EDWARD G. FAILE, Esq., of Westchester, who was received with hearty applause, and who very briefly pledged his best efforts for the prosperity of interests committed to his charge.

A vote of thanks to the retiring officers was moved by Hon. A. B. CONGER, after which the meeting adjourned.

SEEDS.—Inclosed you will find some superior sweet corn, if it will not be too late for your latitude. It is a mixture of a large variety of white corn with the sweet corn—large stalks and large ears. Also, a few pumpkin seeds. W. DENNIS. Bucks Co., Pa.

[For the Country Gentleman and Cultivator.]
RAISING CLOVER SEED.

Herkimer county is celebrated for its clover seed. Its production is here carried on as near to perfection as is possible, and has been made a business of for twenty-five to thirty years.

The climate seems peculiarly favorable. The land is generally rolling, and it is on the upland where the best success is attained.

Many farmers have made their fortunes by clover-seed alone. Christian Roof, a resident of Stark (in this county,) has raised a hundred and eight bushels from twenty acres, in one crop. The seed brought him ten dollars per bushel. This paid for the land, a lot of twenty-four acres which he bought two years before. It is the large clover which is mostly raised, though the June variety has been introduced recently.

The plan of raising clover seed is this:—The seed is sown usually after the harrow leaves the ground in the spring. Wheat or barley ground is preferable—decidedly so. As these grains, however, are but little sowed, oat land has to be depended upon. In a moist season there is no difficulty unless the grain is very heavy. The few fields that are sowed to winter grain, are, of course, preferable to anything else, as then the seed is sown early. I have had my best success sowing it on the late snows of March or April.

We always mix a little timothy seed with the clover, in various proportions—generally half-and-half. Some sow double the amount of clover. The timothy is mixed with the clover in consequence of the climate and the nature of the soil. The ground has a tendency to heave. In the spring the freezing and thawing lifts the roots of the clover, in many places clean out of the ground. The soil is a sandy loam, yellow on the knolls and dark in the valleys, with a substratum of clay in many places. The hills are usually light, and require manure to raise almost any crop. There, exposed to the winds, clover as well as winter grain, fares hard in the winter. Even timothy, with its surface-creeping root, will sometimes be lifted by the frost, though seldom or never in old meadows.

Clover, therefore, may be said to last but a year. A favorable winter will extend it to two, and even more years, but this is not to be relied on. The timothy is always sowed with the clover and appears the second year as a crop, or when the clover disappears, which in most cases is the first year, when mowed for seed—less so when hay is cut, as the timothy is then encouraged, and seems to aid the security of the clover. But when cut for seed the frost generally sweeps the clover the first year, probably on account of the nakedness of the ground. The second crop is generally an excellent one of timothy, and latterly in most cases is cut for seed—cut with the cradle, and harvested the same as grain.

We have now our ground seeded. We have used a peck of seed—mixed clover and timothy—to the acre. Some use more, some less.

The spring opens auspiciously, always with clover seeding. As soon as the ground is "settled"—as soon as it is compact enough to sustain the hoofs of the cattle, especially sheep, both cattle and sheep are let on and kept there till the *fifteenth* of June. This fifteenth of the month is a very important thing. A week earlier often makes a fatal difference. If fed later the frost is apt to interfere; if earlier, the sun. This is the universal experience here. Now and then the fifteenth finds the frost too early; but in the majority of cases, this is the point most favorable between the sun and the frost. It is seldom that the sun scorches when close cropping is extended to the middle of the month. The frost is most feared.

Another equally vital point is, *close feeding*. This gives *uniformity of ripening*—an indispensable condition, as the proper, the best time for ripening, is but a short period between the sun and the frost. A cool, rather dry atmosphere is needed, as there is nothing more

delicate than the "filling" of clover. It is like the diamond or gold that forms in the mine. A few days generally will determine. But these days are seldom wanting. A total failure has hardly been met with the last eight or ten years, since the thing has been understood. There are constant variations of course, as the seasons vary. Hot, damp weather, is always fatal at the "filling" time. A "blast" never fails to be the result. Much rain has also an injurious effect. This is the experience.

There is one advantage we have. At the time when it is determined whether there will be a good crop of seed or not, which is when the head is still green, though browned on the outside, the stalk of course green,—the crop may be cut for hay. This was much done years ago, but recently less. Either the few early or late heads are good. I don't think I have ever known it to fail. But this alone, or both the early and late heads, will not pay to harvest for seed, unless the intervening main crop of heads is a partial success. The three united, are never an occurrence,—one or more will always fail. At least this is my experience, and observation also.

There is one difficulty experienced in raising clover-seed—the difficulty of feeding close. It should be cropped down to the ground. If the field looks like a barren field—like the road—all the better, as it gives uniformity of ripening, as we before stated.

It will be at once seen that this process of close-cropping, is the worse for the stock upon it; for the last week or two there is always a falling off in flesh. With sheep this is less so, and hardly perceptible. Hence it is difficult to get stock enough to feed down your clover. A dairyman is pretty sure not to lend you his cows to starve and shrink them. Sheep are always willingly let. If the weather is showery and growing, the difficulty of close-cropping is increased. Thus between the weather and the want of stock the clover is sometimes left "uneven." This is always dreaded.

Another indispensable now follows: Plaster (gypsum) must be used. This is applied—by no means in the spring—but immediately as the stock leaves the field. This is necessary to give *all* a vigorous growth, and to overcome the drought which usually follows. It is even held that plaster has a particular quality, aside from its usual effect upon grain, that influences clover. Plaster is certainly necessary to a full, vigorous growth, not only of straw, but of seed.

As soon as ripe, or after the first killing frost, the clover is mowed, dried and gathered. It used to be threshed on the field, the "chaff" then drawn to the clover mill. But it is now the practice to thresh in the winter, and "grind" in the barn. A common thresher will clear the seed from the chaff; but mills for the purpose are used.

The richest soil is not the best, in fact not so good as a more light soil. A soil pretty well worn out, is usually put down to clover seed. It is always considered to improve the soil, even if but a single crop of seed is taken off. The ground is always mellower after clover than before, and in this respect at least is improved. But it is benefitted by the long roots of the clover, which occupy the soil like a mat. These form manure. A field plowed immediately after the clover is removed, turns up "mellow as an ash-heap," and is considered certain for a good crop of grain, and even corn, the succeeding year. Raising clover seed and dairying, are the two great modes of improving our soil; and they have improved it a hundred per cent in twenty years.

To raise clover-seed then, there must be a good seeding, the thicker the better; close cropping till the middle of June; the stones carefully picked, as the clover is usually lodged, and the scythe hugs the ground; plaster immediately applied (the usual amount) after the stock is turned out, and the thing is done. This is now the successful experience here. The present has been a very favorable year, averaging from three to five bushels to the acre.

After the second year, when a crop of timothy seed is

secured, the lot is left for meadow, timothy preponderating, and producing our best hay. As the clover lessens each year, the timothy takes its place, till within a few years, little or no clover is left. F. G.

[For the Country Gentleman and Cultivator.]
GETTING A FARM.

Those examples of successful farming where young men have been able in a few years to pay for and improve their farms seem, to many, extreme cases of success, and exceptions to the general rule. The more usual conditions of attaining the possession of a good farm, are many years of industry and careful management. The profits of farming are moderate, and the acquisition of a good estate by this calling requires more patience than by any other. And this is the reason why many young men turn from this to some more promising profession. They are in haste to possess the means of setting up a comfortable establishment, and cannot think of waiting for years for an independence, and turn therefore to some business which promises a fortune in what they are pleased to call a reasonable time. They mean to have a farm and gratify their rural tastes, when they shall have made money enough by some profitable business to be able to do so.

It is not to my purpose now to show how often these young men are disappointed, and how they are deceived in their views of the enjoyment of rural life. My object is to give a word of encouragement to those who may be tempted to shun the slow way of getting an estate, and my lesson shall be drawn from the experience and observation of more than 25 years. The experience of a large number within my observation during this time may be considered embodied in one case, which is probably a fair sample of a very large number all over the land.

A young man began his career by working for his father at stipulated wages, which he continued a few years, until his ability was fully tested, when he took the management of a farm on shares. The time at length came, when he would have a farm of his own, which he purchased with much solicitude and many fears of ultimate success in paying for it. His former accumulations, together with a small patrimony from his father's estate, was not sufficient to pay for half the cost of the farm and stock, and he often wished himself on a smaller place, and out of debt. The farm he purchased, like many others of that day, had been pretty hardly run with crops of grain, and was much out of repair. There was an enterprise requiring good courage and perseverance. Our farmer had three principal things to do: he had his family to support, which was not small, his debt to pay, and his farm to improve. It is sufficient to say that he carried these on together every year. There was no year but at the end of it he had, besides paying the interest and improving his farm, paid something upon the principal, generally however a little less than he had anticipated. He had not only these things to do, but he must sustain the social position which his family and his education entitled him to. His civil, social and religious relations must be maintained. Not one of these was neglected; he stood in his place as an American citizen, and took upon himself all the duties and responsibilities of his station. In this respect he avoided an error which most young men in debt fall into, who in their impatience, are ready to forego almost the comforts of life, ignore most important social relations, and leave all improvements till they are "out of debt." They are willing to deny themselves and their families all the elegancies of life, and make themselves mere drudges to obtain first a competence, and when this is accomplished they find themselves unfitted by their habits and associations for a true enjoyment of what they possess, have become sordid, and are only satisfied with increase of gain. But our farmer improved his place with many tasteful though simple embellishments, and his mind by reading and good society, and this without any great expense of

time and money. He rejected the principle that a man ought to make as much money as he can.

He accomplished what he undertook, in paying for his farm. Not quite so soon as he expected, (the gray hairs begin to crown his head,) for he had his share of the reverses of business, and it might seem a long time, but when he had paid his debt, he had a complete farm, a good estate, a competence. For, as I said, he improved his farm yearly, so that the productive capacity of it is more than doubled, and the nett profits are in still greater proportion; the fences are good, and the buildings greatly enlarged and improved, and the stock of the farm increased in number and value. So that what cost him ten thousand dollars is now worth more than twenty thousand dollars.

Now the very thing which our fast young men picture to themselves as the desired end of all their anxious toil and hazardous speculation—a quiet enjoyment of rural life, he has possessed from the beginning of his career. He has not denied himself one of the real blessings of life. All the healthful and satisfying delights of labor he has enjoyed without many of its anxieties. What a zest it gives to his labor that he is improving and embellishing what is to him, and what will be to his children, a beloved home. N. REED. *Anenia, Dutchess Co., N. Y.*

CURE FOR BONE SPAVIN

EDS. CO. GENT.—I send you a recipe for the cure of bone spavin, which is also a valuable remedy for rheumatism, bruises, cuts, &c., in the human system:

Liniment for Bone Spavin.

One pint of alcohol.

One ounce organum oil.

One ounce British oil.

One ounce camphor gum.

One ounce Castile soap.

One ounce opium.

Three ounces spirits of turpentine.

Cut the soap fine and mix all together.

ALEX. WALLING.

[For the Country Gentleman and Cultivator.]

CURING TOBACCO.

MESSRS. EDITORS—I notice an inquiry in the last number of the Co. GENT. by E. M. S., as to the cause and prevention of "fat stems" in tobacco, and also, how to know when the plant is ripe. The cause of "fat stems" is, not letting the plant hang till the stem of the leaf is fully cured. The remedy is, let it hang *till it is fully cured*. That is a *sure* remedy. I must say that E. M. S. does not know what he is talking about when he advises brother farmers to use "lath" instead of twine to hang our tobacco. He says it is more costly, does not take *half* so many *nails*, and is more convenient, &c. Now sir, if he uses *two* nails in hanging his small crop, he uses *more* than twice as many as we do in hanging several acres, for we do not use *one*. We use sawed stuff for hanging poles, sawed 5 inches by 2, and 12 feet long. Make the twine fast to the first plant, and place it against the left hand end of the pole; the next is put on the opposite side, give the twine one turn round the plant, and the next in like manner, and so on, till the pole is filled. Then make the twine fast to the last plant. Each pole should hold from 26 to 28 plants, according to the bigness of the growth. An experienced hand will easily hang from half to three-fourths of an acre per day. "Try it brother farmer," and you will never use *lath* "again." Tobacco should stand from 15 to 20 days after it is topped before it is fit to cut. When ripe it turns spotted. Another way to ascertain when it is ripe is, double the leaf from the under side; if it cracks or breaks, no matter how soon it is cut if the weather is suitable. It injures the crop for wrappers to let it get too ripe.

P. LATHROP.

South Hadley Falls, Mass., Feb., 1863.



THE CULTIVATOR.

ALBANY, N. Y., MARCH, 1863.

We devote all the space we can spare for the purpose—to the exclusion of a number of articles intended for publication this week—to the proceedings of our State Agricultural Society at its regular Winter Meeting in this city on the 11th and 12th instants. It will be seen that the receipts for the past year were \$17,169.02; expenditures \$13,354.96; cash on hand, \$3,814.66, including the State appropriation of \$2,000 for flax machinery premiums. EDWARD G. FAILE, Esq., of Westchester county, was elected President for this year. UTICA was recommended as the place for holding the next State Fair.

An application was presented from the citizens of ROCHESTER for the holding of the next State Fair in that city, as the almost continuous rain during the Exhibition of 1862 prevented the large attendance of the Farmers of Western New York which might otherwise have been expected.

At the session of the Executive Committee (new board) on the 13th, thirty days were accorded to the citizens of Utica to complete their arrangements, and the location and time of the Fair were not positively fixed—the subject being postponed until the next meeting of the Committee, to meet the wishes of those who have the matter in charge at Utica.

THE INTERNATIONAL AGRICULTURAL EXHIBITION AT HAMBURG.—We have received the following note from Hon. BRADFORD R. WOOD, United States Minister to Denmark, with reference to the International Exhibition to be held at Hamburg, July 14-20, which has been already noticed in our columns:

COPENHAGEN, January 20, 1863.

L. TUCKER, Esq.—*My Dear Sir:* I herewith enclose you the circular of the intended exhibition at Hamburg. In my opinion it is more important that we should be well represented there than at any exhibition that has taken place in Europe. Will you do all you can to make it known to our exhibitors? We shall, if we choose, have a fair and successful field. Very truly yours,

BRADFORD R. WOOD.

All particulars with regard to this exhibition may be obtained from Messrs. Austin Baldwin & Co., 72 Broadway, New-York. Circulars will also be sent on application to Col. B. P. JOHNSON, Agricultural rooms, Albany. We are glad to see that the attention of Congress has been called to the subject; on Thursday a joint resolution was reported in the House to facilitate a proper representation of the interests of the United States on this occasion, and appropriating \$10,000 for the transportation of articles to New-York, thence to Hamburg and back, to be returned free of duty, also \$5,000 for the salaries of a commissioner and clerk. Intending exhibitors should move promptly, as the entries are to be closed April 15th.

CATTLE SALES.—We learn that A. N. MERRICK, Esq., of Springfield, Mass., has recently purchased of G. Clarke, of Otsego county, N. Y., his thorough-bred Hereford bull "Petrarch," and also a two-year old heifer, "Bombazine 3d," both being very fine specimens of this excellent breed of cattle. Also a Devon bull calf "Sigel," and cow "Fairy 3d," from the herd of the Hon. E. H.

HYDE, Stafford, Ct. Mr. Hyde is President of the Connecticut State Agricultural Society, and has a well known Devon herd, to which he has lately added the Devon bull "Nelson," which took the first prize at the State Fair at Hartford, in October last.

■ NICHOLAS LONGWORTH, so long and widely known as the great advocate and manufacturer of American Wines, as well as for his interest in Horticultural pursuits, died at his residence in Cincinnati on the 10th inst., after a severe and prolonged illness. He was born at Newark, N. J., January 16, 1782, and had consequently completed a few weeks more than his eighty-first year at the time of his death. In the year 1803, he emigrated to Ohio, and took up his residence in Cincinnati, then in its infancy. He was fitted for the bar by Jacob Burnet, one of the most eminent lawyers of that region, and after twenty-five years of practice, he retired from the profession, devoting the remainder of his life to the care of his large estates, and to practical horticulture.

Mr. LONGWORTH was the first to call attention to that very important fact in connection with the successful cultivation of the strawberry plant in this country—the difference existing in the sexual character of the blooms produced by different varieties. His views on this point, although controverted at first, have now received the assent of all our cultivators. He induced many vine-tenders and others of European experience in grape-growing, to devote their attention to vineyards, and become his tenants in the vicinity of Cincinnati, and encouraged them to friendly rivalry not only in the character of the wine they made, which went into his cellars, and subsequently reached the market under his brand, but also in the production of new varieties of the Strawberry, and in experimenting with untried varieties of the Grape of both foreign and domestic origin. Outside of his Horticultural pursuits, Mr. LONGWORTH bore the character of a liberal and public-spirited steward of the very large wealth acquired by the judgment he always displayed in real estate investments, and otherwise; he was an early and constant patron of POWERS, the famous artist, and nothing pleased him more than to call the admiration of his visitors to the fruits of POWERS' genius which adorned his mansion. Simple and plain in his attire and habits, his eightieth year found him almost as active and industrious as ever, and his death creates a blank in the horticultural circles of his State and of the country, which there is perhaps no one left to fill.

■ RICHARDS BRADLEY, Esq., of Brattleboro, Vt., has purchased from SAM'L THORNE, Esq., Washington Hollow, Dutchess Co., N. Y., a young Short-Horn cow, just parted from her first calf, which, with previous purchases from the same source, should tell to advantage on the rich bottom lands of the Connecticut Valley.

The prospects of Improved Stock appear to brighten as the winter passes, and we should not be surprised if the summer opened on a good demand at encouraging prices. There was certainly never a better opportunity for buyers than is now afforded, and those who are interested will act wisely to select intended purchases at an early day. Mr. THORNE, and we believe several other breeders, have had quite a brisk demand during the month. We cheerfully record the particulars of transactions of the kind, not only because they are interesting to a large class in the agricultural world, but also for the reason that this publicity

may help to promote the dissemination of improved blood in other directions.

It has been already intimated that the unprecedented advance in paper—the price of which is still very firm, with a prospect of increase rather than abatement—might compel us to diminish the quantity required for our weekly edition, either by giving a smaller number of pages during the summer season, or by accommodating ourselves in some other way to the necessities of the case. But the increased subscription receipts of the past two months—beyond any estimate we had allowed ourselves to entertain—may enable us, if sustained by a corresponding increase during the remainder of the year, to keep up the same size and frequency of issue as heretofore, without even a temporary change, and, moreover, without involving a loss too great to be overbalanced by the pleasure of passing through so difficult a “crisis” with no increase of price, nor the slightest diminution in quality or quantity of matter published.

To this end, however, we think we may fairly urge our friends to continue the kind efforts, for which we have already to return our thanks to so many,—in extending the circulation of the COUNTRY GENTLEMAN and THE CULTIVATOR. Their claims upon the support of the Agricultural community we base solely upon the actual pecuniary profit which it is believed every intelligent reader must derive from their perusal, in proportion to their cost. If any practical subscriber to the COUNTRY GENTLEMAN, cannot secure fully *Four Cents' Worth of Information out of Each Weekly Number*—in all, if not in each, of the different Departments to which it is devoted—we should think the labor expended upon its preparation, sadly thrown away.

Additions to clubs may of course be forwarded at club rates, but it is not too late to make up new clubs; and, in these two directions, much may still be accomplished. If every subscriber who has not yet paid his subscription for the current year, would but send *one additional name* together with what he is owing himself,—or if every new subscriber already received would endeavor to secure one more new reader,—there would be no doubt or uncertainty whatever as to the future—whatever might be the course of the paper market. And those in arrears may never see a time, so favorable as the present, for the payment of debts; since, in the abundance of money, the loss arising from its depreciation is shifted from their shoulders to ours, so soon as the debt is paid.

WHAT IS THE SHRINKAGE OF CORN?—Is a question often asked and not often answered. On the 12th day of December 1860, weather bright and clear, I took from the top of my corn-crib where there was a free circulation of air, a lot of ears of corn, which were gathered about the first of November in fine weather,—the corn very sound, and weighed them separately; shelling since and weighing corn and cob separately. Kept them in a warm room ten days, and found the shrinkage from 25 to 29 per cent. of original weight. The cob shrank about the same per cent. as the corn which was shelled off. H. C. Three Oaks, Mich.

AG. STATISTICS.—We are engaged in an interesting enterprise of collecting the Ag. and Hort. Statistics of our County, (Cayuga,) which, when they are embodied in the report, will form a chapter which will be perused with no little interest, and we feel assured that the enterprise will

give a new impetus to the agriculture of our own county, and will also emulate the zeal of enterprising farmers in other counties to commence and carry out greater improvements in every department of agriculture than we have already met with. The returns from some of the towns, and the laudable interest that is manifested in this enterprise, shows that the motto of many of our farmers is “*Excelsior*.” S. EDWARDS TODD. Auburn, Feb. 10.

CORN AFTER BUCKWHEAT.—I see the “Corn after Buckwheat” subject frequently discussed in THE CULTIVATOR. A notice of the article on p. 109, 1857, might be satisfactory to some subscribers who have commenced taking the paper since that time. I have never seen it stated that plaster will not make buckwheat land produce good corn. If it is, or is not, a cure for the evil effect of a crop of buckwheat on a succeeding crop of corn, should be proved by trials and the results published.

W. C. H.

FROM A SUBSCRIBER IN MICHIGAN.—Permit me to express to you my appreciation of the admirable manner in which the Editorial department of the Co. GENT., is conducted, and especially of the matter, temper and style of the leading articles. The completeness of the paper, not only as regards the weekly numbers, but pervading the two annual volumes, is without parallel. While your subscribers have well attested the practical value of the paper, I have wished to express to you, as I have briefly done, my appreciation of the results of your labors and abilities in giving organization and soul to the fragments of which it is composed. E. D. Kent Co., Mich.

AVERAGE OF WHEAT CROP IN MICHIGAN.—Having very little faith in the usual way of estimating the average yield of grain, I last year requested several thrashers to keep an accurate account of the number of bushels of grain thrashed, and the quantity of land on which it was grown. At this time, but one (JAMES R. GREER of West Bloomfield,) has made returns, and his beat is not in the heaviest grain producing portion of the county. He thrashed for forty-four persons, an aggregate of nine thousand nine hundred and twenty-five bushels of wheat, grown on six hundred and sixteen acres of ground, making an average of sixteen bushels and nearly one-eighth per acre. He also thrashed two thousand five hundred and ninety-four bushels of oats, grown on one hundred and two acres of land, by twenty-two persons, being an average of twenty-five bushels and nearly one-half per acre. These yields of grain in a fair average grain-growing region, during a season much better than common, do not look like “high old farming,” yet the writer does not have any fear in comparing the farms and farmers of this part of the peninsula with those of any other portion of the *remnant* of the Union. H. Pontiac, Jan. 13, 1863.

THE COUNTRY GENTLEMAN IN A CULTIVATOR CLUB.—IN making up Clubs, a subscription to the COUNTRY GENTLEMAN at \$2 a year, will count the same as Four Subscribers to THE CULTIVATOR, and the subscriber to the COUNTRY GENTLEMAN will receive one copy of the REGISTER. That is, Five Dollars will pay for one copy of the COUNTRY GENTLEMAN and six copies of THE CULTIVATOR, each subscriber receiving a copy of the REGISTER. And Ten Dollars will pay for six copies of THE CULTIVATOR and four copies of the COUNTRY GENTLEMAN, each subscriber receiving a copy of the REGISTER.

SINGLE COPIES OF THE WAR MAP sent postpaid for 25 cents each.

THE ILLUSTRATED ANNUAL REGISTER.—A subscriber in Ohio, writes as follows:—“I have all of your Registers, and would not part with them for ten times their cost, if they could not be replaced.”

Our correspondent J. B. POYNTZ, Esq., of Maysville, Ky., sends us the result of an experiment undertaken by him last season to ascertain the Potato giving the largest per centum of increase upon the quantity planted. He says that if he had been aware of the results obtained in this experiment, in time to have acted on them in putting in his last crop, the twenty-five acres thus planted would have been worth five hundred dollars more to him when the crop was dug than the product actually sold for—his crop having been disposed of as dug at one dollar per bushel. Mr. POYNTZ' farm is in latitude 38 $\frac{1}{4}$, longitude 84 W.—land, limestone, with yellow clay subsoil. Mr. P. writes:—

"1862, May 26th—Planted 42 single eyes, of each variety. Cut to weigh one pound two ounces, each lot. The ground was spaded one spade deep—no manure or top-dressing used. The rows were 4 feet apart, and the eyes planted 22 inches apart in the rows, and 4 inches beneath the surface. Had no rain to wet the ground to the depth they were planted, while they were in the ground. They were dug, counted and weighed in November.

		lbs.	oz.
White Fleshed Peach Blow,.....	132 tubers, weighing 15	2	
White Chili,.....	146 do. do. 11	14	
Andes,.....	146 do. do. 15	12	
Garnet Chili,.....	101 do. do. 13		
White Neshannock,.....	138 do. do. 10	14	
Blue Neshannock,.....	194 do. do. 11	12	
Copper Mine,.....	80 do. do. 7		
Pink Eye Rusty Coat,.....	90 do. do. 8	8	
Mercer, (blue streaked),.....	130 do. do. 10		

In the above, no potato was rejected on account of its size; all that could be found in digging were counted and weighed."

OHIO SORGHUM CONVENTION.—The Ohio Farmer contains an extended Report of the interesting and important Convention held recently at Columbus. The members present who had experimented in the manufacture of Sorghum sugar and molasses, all preferred a soil of medium fertility without manure. The rich bottom gave a luxuriant growth of stalk, but the juice was of inferior quality. Some of the members thought it unnecessary to strip the leaves from the stalks, and had thus made good molasses, but under ordinary circumstances, the practice was generally preferred. They should not be stripped before the time of cutting; after which they might be corded for several weeks without injury. Some preferred removing the seed before it ripened; this would no doubt prevent exhaustion of the soil. It had been found necessary not to cover the seed very deep—as they are much smaller than Indian corn; the necessity of a less depth is obvious; probably an inch would be quite enough. The sorghum was preferred to the Imphee by the great majority of members present. For crushing the stalks, the mills with three rollers were generally preferred to those with two—rapid evaporation of the juice without burning, has been found important. The prevailing opinion was, that this manufacture would prove successful, and of importance in value in Ohio.

Mr. GEO. CARY of this city has recently added to his flock of South Downs, several head from Thorndale and Holmdel. He purchased from Mr. J. C. TAYLOR a yearling ewe, sired by "Reserve," and in lamb to "No. 89," which was procured, it will be remembered, at Mr. WEBB's sale in 1861; and from Mr. SAMUEL THORNE two more ewes—one of them, "No. 10," imported from the flock of Henry Lugar, Esq., Bury St. Edmunds, and the other, "No. 62," of Mr. Thorne's breeding, and descent-

ded from the ram "No. 112." Both these ewes are in lamb to "Archbishop," the prize ram at the Canterbury Royal Show, and imported by Mr. Thorne in 1860.

We are glad to note the foundation, on such an excellent basis, of a South-Down flock near this city, where this admirable breed has not of late had the attention it deserves.

A Young Farmer of Michigan, writes us as follows:—"I have got together a flock of 95 sheep, 14 of which averaged 16 lbs. of washed wool per head last spring, and the rest of the flock are *good*. I have fixed places for keeping them, and have managed them according to notions and plans set forth in your CULTIVATOR, and which I am satisfied have been worth to me many dollars."

BEMENT'S POULTERER'S COMPANION.—Orders for several copies of this book have been waiting attention at this office for some time. The publishers, Harper & Bros., New York, informed us in December last that they were printing a new edition, and, as soon as it is ready, we shall receive a supply and fill orders on hand. Meantime there is nothing to do but to wait.

W. W. DE ANGELIS, Esq., of Holland Patent, sends us a sample of Cheese made by him, according to directions heretofore published in the columns of this paper, and very well sustaining his recommendation of the system employed, in the richness of the product obtained.

DELAWARE COUNTY FARMING.—People complain about here, of the times being "clus," but I "can't see it." The weather has not been rigid, by any means; indeed, it has been unseasonably mild—snow about five inches, and good sleighing at present, and as for shinplasters, they are "lying about loose" everywhere, thicker than the lice of Egypt, and about as great a plague. This portion of Delaware Co., was once famed for its large exports of lumber, by way of the Delaware river to Philadelphia, but now, since its lumber on account of scarcity has become a secondary consideration, the people have turned their attention to dairying and wool-growing, and with very flattering results in the line of profits. There is no more fertile region in the "Old Empire" than this valley of the Delaware, well adapted for the growing of corn, hay and oats as staples for winter consumption, while the slope along the base of the mountains affords ample and nutritious pasture for thousands of ruminating quadrupeds. Indeed, for salubrity of climate, and beauty of scenery, as well as for successful farming, this once wild and picturesque region on the Delaware is unsurpassed. Through the untiring perseverance of the intelligent and hardy generation which has succeeded the honest but unrequited lumberman, the mountain and wilderness has been made glad, and every valley and hillside and mountain-top has been made "to rejoice and blossom as the rose." Prices of produce are as follows, at the present time: Butter 20 to 25c.; Corn, \$1.00; Oats and Buckwheat, 60c.; Potatoes 50 to 60c., &c. Shipping point, Deposit, N. & E. R. R. B. McGIBBON.

A convention of Sorghum growers was held at Uniontown, Fayette Co., Pa., on New Year's day. It was stated that 30,000 gallons of the Sorghum molasses were made in the county during the year, and that thirty mills are in operation.

Inquiries and Answers.

THE CRANBERRY.—Will you please tell me how to plant cranberries—i. e., time, soil, suitable number of plants, nearest place they can be obtained, after culture, product, &c. I have a piece of land, the surface of which (muck) has been hauled off to the depth of nearly three feet. The soil left is a gravelly sand, always wet, and in the winter will be flooded, as I have thrown a dam across to make an ice house. Is this land suitable? G. B. *Cecilton, Md.* [The best thing our correspondent can do in learning how to manage the cranberry, is to send 60 cents to this office, for "Eastwood on the Cranberry," and he will receive it by mail. There are so many modifying circumstances, in the management of this crop, that we cannot give full directions in a single short article. Plants can be had of Dr. Halsey, Victory, Cayuga Co., N. Y., G. A. Bates, Bellingham, Mass., and from several other cultivators, whose address we have now forgotten.]

MUCK.—What is the best mode of using muck when some distance from the barn? G. B. [Throw the muck into heaps in the summer time, when it will become well dried by winter, then spread it over cattle yards, when it will be well worked in with manure. Or, it may be used in the manufacture of compost heaps, by alternating it in thin layers with manure.]

ROTATION.—What is the best rotation to improve land under the five field system? [The rotation will have to be modified somewhat according to the prevailing crops of the locality. The following is a good rotation where wheat may be raised: 1st year, corn with manure; 2d year, peas, beans or barley; 3d year, wheat; 4th and 5th years, clover. Where the soil is strong, oats may take the place of barley, provided manure is applied to the succeeding crop of wheat.]

SPECIAL MANURES.—What is a good composition as a special manure for corn, potatoes, beans, and cabbages, to be used when planting, and as a top-dressing for the young plants afterwards? I have perhaps 50 loads of surface soil, a gravelly loam, which has been lying in a pile for several years—would it pay to compost this with plaster or other special manure before spreading? If so, which is the best, and in what proportions? M. A. *Conn.* [Common yard or stable manure is nearly the only one that can be relied on, as useful under all circumstances. Special manures are sometimes valuable, but more frequently not so; and experiment is required to determine. There would be no advantage in mixing the surface soil with plaster; it would make good compost with common manure.]

HOP CULTURE.—One farmer wishes to know if there is any work on "hop-growing," that is reliable, and that gives all the necessary information so that a person, altogether unacquainted with the business, could from the directions given, grow hops and care for them with success. If you know of such a work please inform me. Or if there is no such work, could one have the necessary information given through the columns of THE CULTIVATOR? T. S. W. [We know of no work on the Culture of Hops. We have heretofore published several good articles on the subject, and shall be pleased to have the experience of any of our readers on the culture of hops.]

RAWHIDE.—Can you or any of your correspondents give a mode of dressing rawhide so that it can be used for halters, flail strings, &c. O. P. G. *Herkimer Co., N. Y.* [In our ILLUSTRATED ANNUAL REGISTER for 1862, p. 224, you will find full directions for dressing rawhides, and the various valuable uses to which it can be put. If you have not the Register for 1862, we can send it to you post-paid on the receipt of twenty-five cents, and this one article will be worth to you more than its cost.]

GAS TAR.—I have recently been using gas tar for paint-

ing the wounds made by removing large branches from apple trees, and think it far better than the shellac solution. Do you think it would in any manner injure the trees? CULT. SUN. [Gas tar or any kind of tar, is a good application for wounds made in removing limbs. It is much improved by an intermixture of brick dust, whiting or fine sand, in which state it should be applied warm. This mixture retains its place better than tar applied alone, and is the best application we know of, all things considered.]

CHICK PEA.—Will you please to inform me through THE CULTIVATOR, whether the Illinois Coffee, or Chick Pea, is or is not identical with the Chick Pea described in Wood's Botany, page 222, edition of 1851. After the description of this, we read that "it proves to be a slow poison, both to man and beast, producing ultimately entire helplessness, by rendering the limbs rigid, but without pain." Now if this is the article which has been sold as the Illinois coffee, I think that the public should be cautioned against it. Is not the Garbanzo (*Cicer arietinum*) the same thing also? The botanical name of the Chick Pea is by some writers at least given as *Cicer arietinum*, although Wood puts it down as *Lathyrus sativus*. I noticed an article in the Jan. number of THE CULTIVATOR, recommending the Garbanzo as a substitute for coffee. OLD SUBSCRIBER. [We have no copy of Wood's Botany at hand; but we can say that the Illinois coffee, Garbanzo, and the Chick pea, as described by Gray and Darlington, are identical. We have no reason to suppose there is any poison in it, as it has been used in the East, as food for man and beast, for centuries.]

DARLINGTON'S WEEDS.—What is the price of American Weeds and Useful Plants, by Wm. Darlington? O. B. *Huron Co., Ohio.* [We can send you the book by mail post-paid for \$1.50.]

FRENCH PRUNE.—Can you tell me whether French prune is more or less troubled by curculio than the old German prune. I refer to the variety described by Mr. Hillmann in THE CULTIVATOR for last December. OLD SUBSCRIBER. [The French Prune has a thinner skin than the German Prune, and is probably more subject to the attacks of the curculio.]

HEN MANURE.—I wish to know the quantity of chicken manure to use in each hill, and whether it will injure the roots of the young plants coming in contact with it. E. H. S. O. [A tablespoonful is enough for each hill. It should not come in contact with the seed. The best way is to dry it, pulverize it thoroughly, carry it in a basket, drop a spoonful into each hill, spreading it a little, then mix it with the soil by two or three strokes of the hoe, and then drop the corn or other seed. Making it into compost by mixing it with several times its bulk of mellow earth or dry muck, answers well, but being bulky requires more labor to distribute it.]

SEEDING TO CLOVER.—I have an old field, just come into my possession, which I wish to seed down to clover, or a mixture of clover and other grasses. The field is too poor to pay for raising a crop of wheat, which is here the usual grain to seed down with—besides I should like, if possible, to get it in clover the coming spring. I have been thinking of sowing corn and seeding down with that, but I fear it will shade the ground too much. What should you advise in the premises? J. M. S. [The only way to seed it down well with clover, is to enrich it and bring it into good cultivation first. Corn fodder would shade the land too much, unless sown too thinly for profit. Moderate success may be expected by the following treatment: spread a good coat of manure evenly this winter. Harrow the surface very thoroughly early in spring, and immediately sow the clover seed, rolling it in.]

GREEN CROPS.—Will you give some information in regard to plowing in clover for manure. It has never been tried in this region to my knowledge, and I am entirely unacquainted with the process. A SUBSCRIBER. *N. Guilford,*

Conn., Jan., 1863. [The process consists simply in turning under a dense growth of two year clover, and allowing it to remain till it decays. If well done, winter wheat may be sown on the inverted sod.]

MANURE.—I see it recommended, in your paper, to apply manure for corn in autumn. Farmers in this section make nearly all their manure in the fall and winter. Will it pay to let it lie in the yard through the summer, so as to cart it out in the fall. **CULT. SUB.** [The answer must depend upon circumstances; very strawy manure may be best if left in heaps to rot through summer, exposed to the weather. Manure containing little litter would be spoiled by this exposure, and if spread would readily harrow fine, and mix with the soil for spring crops. But other things being equal, it is always best to spread manure in autumn or winter. If necessary, compost heaps with turf, &c., may be made with the last named manure.]

COMPARATIVE VALUE OF CATTLE FEED.—Can you give the comparative value of corn, oats, hay and straw, for fodder? **CULT. SUBSCRIBER.** [The average of a number of experiments give the comparative value of these kinds of food. The figures giving the number of pounds of each substance to be equal to the quantity given of any other:

Good Hay,	100 lbs.	Indian Corn,	56 lbs.
Rye Straw,	350 lbs.	Oats,	59 lbs.
Oat Straw,	220 lbs.	Rye,	49 lbs.

VALUE OF FODDER.—Will you please answer a few inquiries, through **THE CULTIVATOR.** If corn is worth 75c. a bushel, oats 60c., hay \$12 a ton, straw \$8, is it not more profitable to sell the corn, oats and straw, and buy hay? **A SUBSCRIBER.** [At the prices given, the hay will be the cheapest feed, corn next, then oats. Straw varies much in quality and value, but it must be a very good ton of straw that is worth half a ton of hay. These estimates are founded on the assumption that the grain is ground and properly fed. A few pounds of ground meal per day, in connection with fodder, contribute largely to the growth and flesh of cattle in winter. It has been found by repeated experiment that large quantities of grain are little or no better than quite moderate regular feeding.]

WILLOW HEDGE.—Will you please give me your opinion as to the white willow (*Salix alba*.) I have thought of making a hedge of it, as a protection to my peach orchard, against northwestern winds, but would not have it upon any account if it is likely to throw up suckers from the roots, as my trees grow near the fence, and the hedge would have to be narrow. Where can the slips be obtained? **a. St. Louis, Mo.** [Such a hedge would naturally occupy, shade, and exhaust a wide strip of land, and not produce suckers, but if well cultivated and managed, this willow would probably make an efficient barrier. Cuttings may be had of **F. K. PHÆNIX**, Bloomington, Illinois.]

SHEEP.—Do sheep do better confined to their yards when the ground is bare in winter, or to be allowed a good range of pasture or meadow land, with what hay they will eat and a small allowance of grain in both cases. **E. F. Forkston, Pa.** [Will some of our wool growers please give us their experience on this point.]

LAYING OUT A GARDEN.—**G. W. G., Lansing, Iowa.**—You will find plans in **RURAL AFFAIRS**, vol. 1, pp. 32-37, 270-274; volume 2, pages 23-31, 84-91, 237-250; vol. 3, pp. 28-31. The three volumes are sent by mail, post-paid, from this office for \$3, and we do not think you can procure so much information on this or other subjects for the price from any other source.

CLEANING GRASS SEED.—Will you please advise me as to which is the *very best* fanning mill for cleaning *Grass Seed*, as well as grain? **c. Fishkill.** [Nutting's Fanning Mill is the best we have ever used for this purpose, but we are not aware that it is anywhere in market—several of our friends having repeatedly written to the General Agent at

Utica without receiving any intelligence. There may be other machines as good, but we have not had an opportunity of becoming acquainted with them.]

HORSE-FEED.—Is it beneficial to wet ground feed for horses, providing they eat it with a relish when dry? **w. H. w.** [It will make very little difference. Some prefer to have it dry, thinking it digests better as they eat it more slowly.]

APPLES.—Is the Tompkins Co. King apple equal to the Baldwin in quality, and is the tree as hardy and productive? **w. H. w.** [It is usually regarded as superior in quality; is about as hardy, but not so productive.]

GREEN CROPS FOR MANURE.—As I sell all my hay pretty much, consequently making but little manure, I would desire to devise some method of plowing under green crops to keep up the fertility of my soil. What method would be advisable? Does it pay to let crops go back without plowing them under? **w. H. w.** [It is much better to plow the crops under than to let them die on the surface. Clover is the best; when two years old the roots are nearly as good as the tops, and assist much in loosening the soil. Turn as heavy a crop under as practicable, just after blossoming. Corn sown thickly makes a good crop for plowing under.]

OVERFLOWED MEADOWS.—Having a low-land meadow which generally overflows three or four times a year, and which consequently cannot be plowed, I would be pleased to know what you would consider the best way of enriching it. **w. H. w.** [The management must depend somewhat upon circumstances, and whether there is current enough in the overflowing water to carry off a top-dressing—also whether the overflowing is only in spring or at different times during summer and autumn. If there is no washing, an evenly spread top-dressing of manure or compost will produce a fine effect. The thin mulching afforded by a deposit from a muddy stream, has been known to triple the growth of grass. Sometimes when the land has been long in grass or is sod-bound, turning the sod with a plow and giving the new surface a copious seeding with grass may be most efficient, but generally we should prefer some kind of top-dressing, either with manure, mud, or evenly spread soil.]

ICE HOUSE.—I am going to put up an ice house above ground, say 12 by 24 feet, and 8 or 10 feet high. For the posts I will splice scantling on to locust, say 8 or 10 ft. scantling to 3 ft. of locust—the walls to be double. How would inch pine boards answer for the walls, and would it tend to preserve them from rotting to give them a coat of coal tar? My filling for a non-conductor will be powdered charcoal—how thick should it be, viz., how far apart should the walls be, that the charcoal may exclude frost, as I want to use part of it for storing vegetables and fruit in the winter? **j. p.** [The mode of building an ice house proposed by our correspondent is a good one, and the inch boards will answer the purpose. Nothing will preserve them better than coal tar, applied rather hot, in warm, dry weather, to the well-seasoned boards. Such a coating will be more especially advantageous and necessary, exposed to the moisture of the melting ice and wet saw-dust. Four inches of well pulverized charcoal will form an excellent non-conducting wall.]

FENCE POSTS.—Would it tend to preserve fence posts of white oak from rotting, to give them a coat of coal tar before putting them in the ground? **j. p. Pittsburgh, Pa.** [Well seasoned fence posts, with two or three successive coats of warm tar, especially at the part just above and below the surface of the ground, will tend effectually to prevent decay. Doubtless if the posts could be soaked for some days in the tar the result would be more complete.]

YANKEE FARMER.—If Mr. S. W. HALL would have one of his Yankee Farmers in New-York city, and say where, in his advertisement, many would have a look at it and purchase who don't like the trouble of writing for details, and don't like to buy without examination. **j. b.**

GRAFTING APPLE, PEAR, AND CHERRY.—I wish to inquire through your excellent paper, the best means of winter grafting of apple stocks, including wrapping and packing away? Are pear stocks treated similar to the apple, or if the process differs, in what particular? Also, what is the best method of grafting the cherry? *A. F. Clayton, Ind.* [There is a full article on root-grafting, with several cuts, in the second volume of *RURAL AFFAIRS*, page 316. This mode of grafting succeeds admirable with the apple, but, under ordinary circumstances, mostly fails with the pear, and entirely with the cherry. On very favorable pear soils, however, by taking the root of the entire plant and performing every part of the operation well, including setting out, it is frequently quite successful. The cherry must be stock-grafted, or on seedlings, standing in the ground, and must be done very early in the spring, or before the buds begin to swell. The apple, pear, and cherry, may be all easily propagated by budding, if the stocks are thrifty and the buds matured.]

TRANSACTIONS N. Y. S. AG. SOCIETY.—*A. B. P.*—Complete sets of these volumes, of which twenty-one have now been published, are nowhere to be had. The only way we know of to get them, is to buy the odd vols. wherever you can find them. In this way, in a few years you may perhaps complete a set. We can furnish you eight or ten of the vols. at this time—price \$1 per vol.

DRAINING.—Will some experienced person state in your columns, what length drains may be safely laid continuously—that is, before they are intersected by a main? I have a field which I desire to drain, that is about 80 or 90 rods in length and of a continuous slope suitable for draining. Will it be safe to lay the drains the whole length of the field, discharging into a main drain at the bottom, or will it be safer to intersect them with two or three mains? I do not recollect to have seen anything reliable on this point. My drains are laid with stone, there being no tile manufactured in this part of the State. *P. Belmont, N. Y.*

SORE MOUTH IN SHEEP.—One of my neighbors has just been showing me his sheep. A number of them have very sore mouths and lips. The lips are scabby, with considerable pus; inside of the mouth very red, with pimples. Can you tell what would occasion this, or give a remedy? I noticed that they had buckwheat straw for litter, and suggested this as the cause, but the owner laughed at the idea. Is buckwheat straw injurious to sheep? *J. H. J.*

MINERAL OIL.—Can you inform me through *THE CULTIVATOR*, whether the oil sold for lubricating purposes, is good to oil harness? It is said to be the offal obtained in the distilling or purifying of the oil obtained in the oil region of Pennsylvania. Some persons say it is good to oil harness, others not. One thing I know, that it is the best lubricating oil that I have tried yet. It does not gum. Its cheapness is one great recommendation for its general use. *H. K.* [The mineral oils are not good for harness leather, as they injure the fibre.]

HORSE-FORKS.—Which is the best kind of horse-power hay-fork for unloading hay in the barn? *H. R. Wrightsville, Pa.* [There are several kinds of horse-fork for pitching hay offered for sale in market, all of which we believe to be good and efficient. We have used Gladding's, and found it particularly useful in lofts near the roof. A very good one (Palmer's) will be found advertised in this paper.]

TOBACCO.—Please answer in *THE CULTIVATOR*, what kind of tobacco is the most profitable to raise. *A. VIRIDET. Putnam Co., Ohio.* [We believe the "Connecticut Seed Leaf" is considered the best in this State and New-England. It can be procured of B. K. BLISS, Springfield, Mass., who will send one ounce by mail, post-paid, for fifty cents.]

POULTRY.—*A. N. H.* For the fowls you inquire for, address *C. N. BEMENT, Bennington Centre, Vt.*

AGRICULTURAL SOCIETIES

THE UNITED STATES AGRICULTURAL SOCIETY—if we may believe a report published in the *National Intelligencer* of Jan. 22d—held its annual meeting at Washington on the 14th ult., and elected the following officers for 1863:

President—*Wm. B. HUBBARD*, Columbus, Ohio.
Vice-Presidents—Representing each State and Territory.
Executive Committee—*W. B. Hubbard*, (ex-off.) Ohio; *Chas. B. Calvert*, Md.; *Marshall P. Wilder*, Mass.; *J. H. Sullivan*, Ohio; *Isaac Newton*, Penn.; *A. H. Myers*, Cal.; *Frederick Smyth*, N. H.; *Ben. P. Poore*, (ex-off.) D. C.; *Le Grand Byington*, Iowa.
Treasurer—*Benjamin B. French*, Washington, D. C.
Secretary—*Ben. Perley Poore*, Washington, D. C.

AMERICAN INSTITUTE.—The annual election of officers of the American Institute was held at New York on the 12th inst. The following gentlemen were elected:

President—*WILLIAM HALL*.
Vice Presidents—*Dudley S. Gregory*, *Edward Walker*, *Sylvester R. Comstock*.
Recording Secretary—*Thos. McElrath*.
Corresponding Secretary—*John Torry*.
Treasurer—*Benedict Lewis, Jr.*.
Finance Committee—*Thos. M. Adriance*, *Jno. M. Read*, *Wm. S. Slocum*, *Thos. Williams, Jr.*, *Geo. Peyton*.

MAINE BOARD OF AGRICULTURE.—The Maine Board of Agriculture, consisting of one delegate from each county, at its late meeting at Augusta, made choice of the following officers:

President—*Hon. SAMUEL F. PERLEY* of Cumberland.
Vice-President—*Samuel Wasson* of Hancock.
Secretary—*Stephen L. Goodale* of York.
Messenger—*James L. Martin* of Danville.

THE NEW-JERSEY STATE AGRICULTURAL SOCIETY has chosen the following officers for the ensuing year:—

President—*P. A. VOORHEES*, Somerset.
Vice-Presidents—First District, *J. B. Jessup*; 2d, *N. L. Rue*; 3d, *G. W. Savage*; 4th, *Lewis Dunn*; 5th, *S. H. Condict*.
Secretary—*Wm. M. Force*.
Treasurer—*Benj. Harris*.

Executive Committee—*E. A. Daughty*, Atlantic; *Wm. Parry*, Burlington; *D. Holsman*, Bergen; *John Gill, Jr.*, Camden; *Dr. Leaming*, Cape May; *B. F. Lee*, Cumberland; *C. M. Saxton*, Essex; *Samuel Hopkins*, Gloucester; *N. N. Halsted*, Hudson; *George A. Exton*, Hunterdon; *J. G. J. Campbell*, Mercer; *J. S. Buckalew*, Middlesex; *Arthur V. Conover*, Monmouth; *Wm. Hilliard*, Morris; *Richard Conover*, Ocean; *Abram Goodwin*, Passaic; *Benj. Acton*, Salem; *J. V. D. Hoagland*, Somerset; *Thomas Lawrence*, Sussex; *C. S. Haines*, Union; *Isaac Wildrick*, Warren.

Mr. J. H. REID, Fredericton, N. B., informs us that during the past season he has sold to Gen. G. G. CUSHMAN of Bangor, Me., four superior Cotswold rams, one two-shear sired by "Champion of England," and three shearings by "Prince of Wales," bred by F. W. STONE, Esq. Mr. REID adds: "We are at present making a good permanent show-yard and track for our Society (York county, N. B.) At an adjourned annual meeting, held on the 13th January, the following officers were unanimous elected for the year 1863:

President—*J. H. Reid*.
Secretary—*Jos. S. Beck*.
Treasurer—*J. H. Beckwith*.
Executive Committee—President, Secretary, Treasurer, *Samuel Fleming*, and *J. L. Inches*.

GOODRICH'S SEEDLING POTATOES.— GARNET CHILI.

PINKEYE RUSTY COAT & CUZCO.

I have a few hundred bushels of these superior potatoes, raised expressly for seed, on unmanured land, which I am prepared to furnish properly packed, and delivered to the Express Company or Railroad at Auburn, N. Y., at \$1 per bushel, in quantities of not less than one bushel.

Orders registered as received, and acknowledged immediately by mail, and potatoes sent by first of April, or as soon as danger of freezing is past. Address

JAMES H. JEWETT,
Feb. 19—*weowtf-m2t*.
Moravia, Cayuga Co., N. Y.

PURE GROUND BONE.

Farmers and Dealers will do well to send in their orders for BONE, early. Last year we could not supply the demand.

POUDRETE.

Farmers and Dealers supplied with a pure article.

HOYT'S AMMONIATED

BONE SUPERPHOSPHATE OF LIME,

a substitute for Peruvian Guano. Sold at wholesale and retail, by

GRIFFING BROTHERS & CO.

Feb. 19—*w9tm2t*.
60 Courtlandt-Street, New-York.

CONNECTICUT SEED LEAF TOBACCO SEED.

Grown by contract by one of the most successful growers in the valley of the Connecticut. Packets containing ONE OUNCE will be mailed, post-paid, to any address, upon receipt of 50 cents in postage currency or new stamps. Prices for larger quantities will be given upon application.

B. K. BLISS,
Springfield, Mass.

SELECT DESCRIPTIVE CATALOGUE OF Fruit and Ornamental Trees,

SHRUBS, GRAPEVINES, ROSES,
SPLENDID DAHLIAS, BEDDING, HERBACEOUS, GREEN AND
HOT-HOUSE PLANTS. Enclose one letter stamp for a catalogue
ready March 1st. Address L. W. PUFFER,

Feb. 1—m3t. North Bridgewater, Mass.

RARE AND BEAUTIFUL FLOWERS.

If you wish to beautify your grounds the coming season, send for
B. B. BLISS'

CELEBRATED SEED CATALOGUE,

The most complete work of the kind ever published in this country. It gives you a list of every variety worthy of cultivation, with full directions for culture. It will be sent to any address in the loyal States, upon the receipt of a three-cent stamp. B. K. BLISS.

Feb. 5—w8tm2t. Springfield, Mass.

ILLUSTRATED CATALOGUE OF RARE AND BEAUTIFUL FLOWER SEEDS.

ROOTS, CUTTINGS, &c., by mail. Sent free to all applicants.
Address H. B. LUM, Sandusky, Ohio.

Jan. 1—w&m3mos

CHINESE SUGAR CANE—(IMPORTED SEED.)

The subscriber offers for sale a small quantity of the
Genuine Sorghum Seed,

Received from Messrs. Vilmorin & Co. of Paris, which may be relied upon as perfectly pure. Packages containing HALF A POUND will be mailed post paid, to any address, upon receipt of 33 cents in postage currency or clean stamps.

B. K. BLISS,
Springfield, Mass.

Feb. 5—w8tm2t.

WHY NOT GROW YOUR OWN TOBACCO AND COFFEE?

I have seed of the OHIO IMPROVED TOBACCO, a superior variety, of last season's growth. Also the GARBANZO, (Cicer arietinum)—this is one of the best substitutes for coffee. For a packet of EITHER of the above seeds enclose 25 cents; or for a packet of EACH, 45 cents, in United States Postage currency or stamps, and the seeds will be sent by mail, postpaid.

L. NORRIS,

Jan. 29—w2tm1t. Windsor, Ashtabula Co., O.

BERKSHIRE BOAR FOR SALE—Eight months old, \$15. Sows, 5 months old, \$10.

Feb. 12—w2tm1t. W. J. PETTEE, Lakeville, Ct.

TO CHEESE MAKERS!

RALPH'S PATENT IMPROVED "ONEIDA CHEESE VAT,"

Was awarded the FIRST PREMIUM by competent judges, after a thorough test of merit, at the New-York State Fair 1863. It is the most simple, durable and effective cheese making apparatus in use. Is used in dairies of 10 to 1,000 cows. The only vat well adapted to "factory" cheese-making. More economical in use than steam, and much less expensive in cost.

We have on hand, ready for delivery, all sizes, varying from 84 to 355 gallons, and make to order larger sizes for factory use.

Circulars containing description, size and price list, and directions for using, sent on application to

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Manufacturers and dealers—wholesale and retail—in Dairyman's
Tools and Implements.

Feb. 12—w&m1f.

ALDERNEY COWS, HEIFERS AND BULLS,

For sale by ROBERT L. MAITLAND,
July 31—w&m1y.

BONE TAFEU—This is a new Fertilizer made from bone and night soil ground fine—is a substitute for Super-phosphate of Lime and Guano upon winter and spring grains, and grass land. Containing as it does every element necessary for the growth of the plant, it is superior to any other fertilizer as a BROADCAST APPLICATION—used at the rate of 300 to 400 pounds per acre. Price, \$45 per ton of 2,200 pounds. Made only by the

LODI MANUFACTURING COMPANY,
Feb. 5—w13tm3t. 66 Courtlandt-st., New-York.

ONE HUNDRED THOUSAND BARRELS OF THE LODI MANUFACTURING COMPANY'S POUDRETTÉ, FOR SALE BY JAMES T. FOSTER, 66 Courtlandt-St., New-York.

In lots to suit purchasers. This Company have the largest capital and factory of the kind in the World, and possess the best facilities for manufacturing the night soil of New-York city, for which they have the exclusive contract, into a dry inodorous but powerful manure—superior to any other fertilizer in market, taking cost and yield into consideration. Price \$1.60 per barrel, free from cartage, for any quantity over 7 barrels—or only \$16 per ton.

Beware of spurious imitations, put up in barrels to resemble this Company's brand.

Attention is called to the following letter from a farmer:

FARMINGTON, N. H., October 9, 1862.

JAMES R. DEY, Esq., President Lodi Manufacturing Co.

For several years past I have used as a fertilizer, the Lodi Manufacturing Co.'s Poudrette. I commenced in 1859. I then had a tenant carrying on my farm upon shares. He agreed to use such artificial means as I should furnish free of expense to him, but he had but little faith in anything but barn-yard manure. I purchased some Poudrette. He took it from the freight-house; opened it; came to me with eyes wide open, and said: "YOU HAVE GOT CHEATED; THIS STUFF IS NOTHING BUT DIRT." I told him, "I supposed I had; it was nothing new; I was in the habit of getting cheated, but as it cost him nothing, I wanted him to use it."

We had a piece of poor, sandy loam land, which he planted with potatoes, without manure. He put Poudrette in the hills eight rows, then omitted eight rows, and then put lime in the hill, as he had a mind to try that.

The result was, that where the Poudrette was put the potatoes came up three or four days before the others. The tops were twice the size during the season, and at harvesting we measured two lots of each, one of which the Poudrette, gave twice the quantity of potatoes, and the other in the proportion of five to three.

The lime had no perceptible effect.

We had a piece of corn land, sandy loam, (my tillage land is sandy and gravelly loam,) the corn had a liberal dressing, say ten cords of barn dung to the acre, spread upon grass land, a part plowed in the fall before, the balance in the spring. The tenant prepared a compost to put in the hill, a mixture of night soil, hog manure and loam well mixed, several times shovelled over, and well incorporated together. This was put in the hill. In eight rows through the middle of the piece, this was omitted and Poudrette was substituted instead. The result was the Poudrette brought the corn up sooner, of a better color, and at the end of two weeks after it came up, nearly twice as large, and it maintained it a head and shoulder above the other during the season. At harvesting we measured the corn, and where we got five bushels with the compost, we had six bushels with the Poudrette.

This satisfied me, and convinced my unbelieving tenant that it was something besides DIRT. I have used it with whatever I plant ever since, and shall continue to do so, as long as it maintains its character, and is furnished at reasonable prices. We sometimes think we save an entire crop of corn by the use of Poudrette, in case of early frost, as it brings the crop to maturity at least a week earlier.

There has been an increasing demand here since it has been introduced, and from my own observation, and the information of others, I think it does as well on upland soils as on sandy loam. I have not been so particular since my first experiment, but every year I left a few rows, so as to be sure that it maintains its character. The present year there is a very marked difference in the appearance of a few rows left without the Poudrette, in a piece of corn not yet harvested. The appearance of your Poudrette to one not accustomed to it, is not very flattering. I will relate an anecdote on this point. In 1860 I prevailed upon a neighbor to try a couple of barrels, for which, I think, he paid me \$4.20. He informed me afterwards that he took it into his field all alone, and opened it; said he, I said to myself, if some one will come along and give me a dollar, he shall have both barrels. No one coming along, he tried it, and has used it every season since, and thinks very highly of its fertilizing qualities. Some of my neighbors have said to me, that they thought it had been worth to them \$5 per barrel. I have used other fertilizers, such as Guano, Superphosphate, &c., most of which are beneficial, but none come fairly up to the Poudrette. One particular advantage Poudrette has over other fertilizers is, that the smell is not offensive, and it will not kill the seed.

And again, it is not so expensive. My method is TO PUT IT IN THE HILL WITH THE SEED. A quart by measure is ample for ten hills, at which rate a barrel will manure a thousand hills. I have known it to do well when a less quantity was used. I think nothing else should be put with it. It is a light matter to put it in the hill with the hand, as a person can drop it faster than a boy can drop corn. And it does not require the large hole necessary to put in dung or compost, and is a protection against the wire worm.

Respectfully yours,

GEO. L. WHITEHOUSE.

The Company's pamphlet, containing directions for use and other valuable information, will be sent free to any one applying for the same

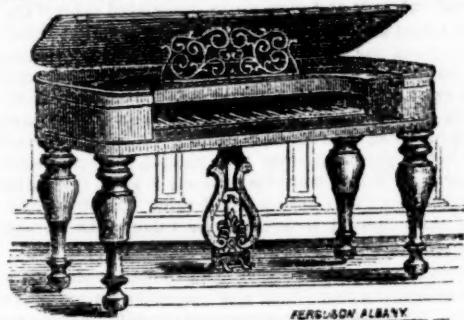
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Jan. 29—w13m3t.

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PREMIUM CHESTER COUNTY WHITES.—THOMAS WOOD continues to ship to any part of the Union these celebrated HOGS in pairs not akin, at reasonable terms. Address PENNINGTONVILLE, Chester Co., Pa. April 3—wly—June 1—mly.

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All tile delivered on board of cars and boats in this city free of charge. Price list sent on application.

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MILCH COWS AND DAIRY FARMING; Comprising the Breeds, Breeding, and Management in Health and Disease, of Dairy and other Stock; the selection of Milch Cows, with a full explanation of Guenon's Method, the Culture of Forage Plants, and the production of Milk, Butter and Cheese; embodying the most recent improvements, and adapted to Farming in the United States and British Provinces. With a Treatise upon the Dairy Husbandry of Holland; to which is added Horsfall's System of Dairy Management. By CHARLES L. FLINT, Secretary of the Massachusetts Board of Agriculture; Author of "A Treatise on Grasses and Forage Plants," &c. Liberally Illustrated.

The above valuable work—the best, we have no hesitation in saying yet issued upon the subject—is for sale at the office of this paper.

Albany, Jan. 1—w&mtf.

L. TUCKER & SON.

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We know of no works which afford so much Practical Information on the subject of American Agriculture, which can be procured for double the cost, as the Third Series of "THE CULTIVATOR," the 10th vol. of which is now completed. The price of the Ten volumes, handsomely bound in muslin, is 75 cents each at this office, or \$1.00 each sent by mail, post paid. Either volume from 1 to 10, can be had separately at the same price. The Ten volumes will be sent per Express to any part of the country, on receipt of \$7.50.

BEMENT'S AMERICAN POULTERER'S COMPANION, price \$1.25—Browne's American Poultry-Yard, price \$1—Miner's Domestic Poultry-Book, price 75 cents. For sale at the office of this paper.

1863 THE ILLUSTRATED ANNUAL 1863

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* To show how full and valuable an article this is, it may be mentioned that Six Insects injurious to Fruit; Thirteen injurious to Grain, and Six injurious to Gardens, are described with complete and new Illustrations, engraved expressly for this article in the ANNUAL REGISTER. It forms, in point of fact, the readiest HANDBOOK OF ENTOMOLOGY for the practical use of the farmer and gardener, we have ever seen.

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6. Dwarf Convolvulus—Oenothera Camarkiana—Splendid Ganzana.
7. Lycoris Haageana—Whittavia Grandiflora.
8. Caileopsis Cardaminifolia—The Gaillardias.

* This article was written for the ANNUAL REGISTER with Drawings and Engravings expressly prepared to accompany it, and not before published in this country, by JAMES VICK, Esq., of Rochester.

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